

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
NORTHERN DIVISION

JASON COUNTS *et al.*,

Plaintiffs,

Case No. 1:16-cv-12541

v.

Honorable Thomas L. Ludington
United States District Judge

GENERAL MOTORS, LLC and
ROBERT BOSCH LLC,

Honorable Patricia T. Morris
United States Magistrate Judge

Defendants.

**OPINION AND ORDER DENYING DEFENDANTS’ *DAUBERT* MOTION, GRANTING
AND DENYING IN PART PLAINTIFFS’ *DAUBERT* MOTION, AND DENYING
DEFENDANTS’ MOTION TO STRIKE PLAINTIFFS’ FILINGS**

Defendants have filed a *Daubert* motion seeking to bar four of Plaintiffs’ experts from testifying at trial and a motion to strike Plaintiffs’ rebuttal expert reports and Plaintiffs’ briefs opposing Defendants’ *Daubert* Motions and Motions for Summary Judgment. Plaintiffs have filed a *Daubert* motion seeking to bar five of Defendants’ experts from trial.

For the reasons stated below, Plaintiff’s motion will be granted with respect to Ryan Harrington’s testimony addressing PEMS testing, and all other motions will be denied.

I.

Plaintiffs are a group of consumers who purchased a 2014 or 2015 Chevrolet Cruze diesel (the “diesel Cruze”). They seek to represent a putative class of “[a]ll persons who purchased or leased a [diesel Cruze].” ECF No. 1 at PageID.62.

Plaintiffs’ alleged injury is their overpayment for their diesel-powered Cruze automobiles. *See id.* at PageID.64–65, 68, 74–75. Plaintiffs allege that General Motors and Bosch duped them into buying a diesel Cruze with “defeat devices” that made its emissions comply with the

regulations of the Environmental Protection Agency (EPA) and California Air Resources Board (“CARB”). Plaintiffs summarize their theory of liability as follows:

[R]eports and vehicle testing now indicate that General Motor’s (GM) so called “Clean Diesel” vehicle, the Chevrolet Cruze (Cruze), emits far more pollution on the road than in lab tests and that these vehicles exceed federal and state emission standards. Real world testing has recently revealed that these vehicles emit dangerous oxides of nitrogen (NO_x) at levels *many times higher than (i) their gasoline counterparts, (ii) what a reasonable consumer would expect from a “Clean Diesel,” and (iii) United States Environmental Protection Agency maximum emissions standards.*

Id. at PageID.12–13.

In August 2020, Plaintiffs filed a motion to exclude five of Defendants’ experts. ECF No. 337 (filed under seal). Later, GM and Bosch filed separate motions for summary judgment. ECF Nos. 338; 339 (filed under seal); 345 (filed under seal); 346. GM also filed an omnibus motion to exclude four of Plaintiffs’ experts. ECF Nos. 339 (filed under seal); 344.

In September 2020, Defendants filed a motion to prevent Plaintiffs from relying on supplemental vehicle testing conducted after fact discovery concluded and after Defendants deposed Juston Smithers, Plaintiffs’ primary liability expert. ECF No. 351. GM’s motion was granted. ECF No. 384 at PageID.30695.

In January 2021, Defendants filed a motion to strike Plaintiffs’ expert reports and their response briefing to Defendants’ motions for summary judgment. ECF No. 397.

Having carefully reviewed that briefing, this Court finds that a hearing is unnecessary and will proceed to address the parties’ motions on the papers. *See* E.D. Mich. LR 7.1(f)(2). Defendants’ motions for summary judgment will be addressed in a separate order.

II.

A.

Plaintiffs' testimony, however, is limited to matters of which they have "personal knowledge." FED. R. EVID. 602. And Plaintiffs may not offer opinion testimony that might embrace "scientific, technical, or other specialized knowledge." FED. R. EVID. 701.

Plaintiffs have retained opinion witnesses to meet their burden of proof for their claims. In turn, Defendants have identified opinion witnesses to criticize Plaintiffs' opinion witnesses.

To prove the existence of defeat devices, Plaintiffs intend to offer testimony from (1) Juston L. Smithers, an expert on PEMS and chassis-dynamometer testing and the CTO of 44 Energy Technologies; and (2) Dr. Kirill Levchenko, a software engineer who is an associate professor at the University of Illinois at Urbana-Champaign. Smithers will testify that Defendants implemented three defeat devices in the diesel Cruze, and Doctor Levchenko will corroborate Smithers's testimony with an analysis of the diesel Cruze's software. To rebut that testimony, Defendants intend to call (3) Ryan Harrington, an automotive and mechanical engineer who is the Division Chief of the United States Department of Transportation's Volpe National Transportation Systems Center. Harrington will testify that Smithers's PEMS testing does not reliably measure the diesel Cruze's emissions output. Defendants also intend to call (4) Nick Molden, an expert on PEMS methodology and data presentation who is the founder and CEO of Emissions Analytics. Molden will contest the soundness of Smithers's engineering analysis.

To demonstrate the fraudulent nature of Defendants' advertising schemes, Plaintiffs intend to offer testimony from (1) Dr. Venkatesh Shankar, a marketing expert who is the Director of Research at the Center for Retailing Studies at Mays Business School of Texas A&M University. Doctor Shankar will testify about the deceptive nature of GM and Bosch's advertising campaign

for the diesel Cruze. To rebut that testimony, Defendants intend to call (2) Dr. Kimberly A. Neuendorf, a marketing expert who is a professor in the School of Communication at Cleveland State University. Doctor Neuendorf will rebut Dr. Shankar's analysis. Defendants also intend to offer testimony from (3) Dr. Eric T. Bradlow, a marketing expert who is the Vice-Dean of Analytics at the Wharton School of the University of Pennsylvania. Doctor Bradlow will challenge the appropriateness of Dr. Shankar's analyses.

To quantify their economic damages, Plaintiffs intend to offer testimony from (1) Edward M. Stockton, an economic-damages expert who is the Vice President and Director of Economics Services at the Fontana Group. Stockton will offer three economic theories for of Plaintiffs' damages. To rebut that testimony, Defendants will call intend to (2) Dr. Lorin Hitt, a damages expert who is the Zhang Jindong Professor of Operations, Information, and Decisions at the Wharton School of the University of Pennsylvania. Doctor Hitt will contest the reliability of Stockton's damages calculations.

B.

In 1923, the District of Columbia Circuit held that scientific evidence was admissible at trial only if it was generally accepted in the scientific community. *See Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923).

In 1975, more than a half-century later, Congress adopted the Federal Rules of Evidence, which included rules for expert testimony, like Rule 702. But it was not until 1993 that the Supreme Court held that the Federal Rules of Evidence, specifically Rule 702, superseded *Frye*'s "general acceptance" test.

In the seminal case of *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, the Supreme Court held that the touchstone of admissibility under Rule 702 is reliability and relevance, not general

acceptance. *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 599 (1993). The *Daubert* Court reasoned that “peer review and publication” are key ways to determine the reliability of scientific knowledge. *Id.* at 593. The Court added that publication alone does not render an opinion admissible, as there is unreliable science that has been published and reliable science that has not. *Id.* Yet if the methodology has been scrutinized and approved by the scientific community, then there is a basis to consider it “good science” because any flaws in the methodology would likely have been uncovered. *Id.*

The “general acceptance” standard from *Frye*, thus, became merely one factor for courts to consider when determining whether to admit scientific evidence. *Id.* at 594. Although the concern was raised that moving away from *Frye* would result in pandemonium, the Court found that “cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof” would alleviate those concerns. *Id.* at 596. If a mistake was made, then the court could correct it by directing the verdict. *Id.*

In 2000, Congress amended Rule 702 to reflect *Daubert*, to affirm the trial court’s role as gatekeeper, and to provide three additional prerequisites for the admissibility of expert testimony. As expert-testimony jurisprudence evolved, the courts have been mindful that “all admissible expert testimony must achieve a certain level of reliability and relevance.” Leslie Morsek, Comment, *Get on Board for the Ride of Your Life! The Ups, the Downs, the Twists, and the Turns of the Applicability of the “Gatekeeper” Function to Scientific and Non-Scientific Expert Evidence: Kumho’s Expansion of Daubert*, 34 AKRON L. REV. 689, 693 (2001).

C.

Expert witnesses provide opinion testimony that is beyond the ken of the average juror. *E.g.*, Suzanne Kessler, Romana DeSalvo & Sara Ellis, *Bringing Blurred Lines into Focus*, 3

BELMONT L. REV. 103, 116 (2016) (noting that experts were admitted to “explain why [two songs] are alike, and then the jury hear[d] it for themselves” in *Williams v. Bridgeport Music, Inc.*, No. LA CV13-06004 JAK, 2014 WL 7877773, at *1 (C.D. Cal. Oct. 30, 2014)) (statement of Romana DeSalvo).

For an opinion witnesses’ testimony to be admissible, it must satisfy Federal Rule of Evidence 702, which governs as follows:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:

- (a) the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- (b) the testimony is based on sufficient facts or data;
- (c) the testimony is the product of reliable principles and methods; and
- (d) the expert has reliably applied the principles and methods to the facts of the case.

FED. R. EVID. 702.

Rule 702 assigns the district court “the task of ensuring that an expert’s testimony both rests on a reliable foundation and is relevant to the task at hand”—a kind of “gatekeeping role.” *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 597 (1993). In order to determine whether an expert’s opinions are reliable, district courts consider several factors that the *Daubert* Court identified, including whether the expert’s methods are testable and subject to peer review. *Id.* at 593–94; *see also United States v. Bonds*, 12 F.3d 540, 558 (6th Cir. 1993) (identifying and discussing the so-called “*Daubert* factors”).

The *Daubert* factors “do not constitute ‘a definitive checklist or test’ and do not apply in every case. *See Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 150 (1999). “Rather, the law grants a district court the same broad latitude when it decides how to determine reliability as it enjoys in respect to its ultimate reliability determination.” *Id.* at 142; *see also Surles ex rel. Johnson v. Greyhound Lines, Inc.*, 474 F.3d 288, 295 (6th Cir. 2007) (“The gatekeeping inquiry is

context-specific and ‘must be tied to the facts of a particular case.’” (quoting *Kumho Tire*, 526 U.S. at 142)).

The crux of the expert-witness analysis is “whether a putative expert’s testimony would be inadmissible junk science or instead would be testimony falling within the ‘range where experts might reasonably differ.’” *See Thomas v. Novartis Pharms. Corp.*, 443 F. App’x 58, 60 (6th Cir. 2011) (unpublished) (quoting *Kumho Tire*, 526 U.S. at 153 (1999)).

An expert’s “[q]ualifications must provide a foundation for an expert to answer the specific question[s]” in the expert report. *See Smith v. Nexus RVs, LLC*, 472 F. Supp. 3d 470, 480 (N.D. Ind. 2020) (citing *Gayton v. McCoy*, 593 F.3d 610, 617–18 (7th Cir. 2010)). That foundation can come from an expert’s experience or other technical knowledge. “Determining where experience-based opinion falls on this spectrum [between lay and expert testimony] has proven particularly challenging to the courts.” Anne Bowen Poulin, *Experience-Based Opinion Testimony: Strengthening the Lay Opinion Rule*, 39 PEPP. L. REV. 551, 553 (2012). Yet, as the Supreme Court correctly observed, often no clear line can be drawn separating expertise based on “science” on the one hand, and that based on “technical or other specialized” knowledge on the other. *Kumho Tire*, 526 U.S. at 148. Thus, regardless of the nature of the expert testimony, Rule 702 “establishes a standard of evidentiary reliability” requiring “a valid . . . connection to the pertinent inquiry as a precondition to admissibility.” *Id.* at 149 (quoting *Daubert*, 509 U.S. at 590, 592). “And whe[n] such testimony’s factual basis, data, principles, methods, or their application are called sufficiently into question,” the Court added, “the trial judge must determine whether the testimony has ‘a reliable basis in the knowledge and experience of [the relevant] discipline.’” *Id.* (quoting *Daubert*, 509 U.S. at 592).

Federal Rule of Evidence 703 governs the bases of experts’ opinion testimony as follows:

An expert may base an opinion on facts or data in the case that the expert has been made aware of or personally observed. If experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject, they need not be admissible for the opinion to be admitted. But if the facts or data would otherwise be inadmissible, the proponent of the opinion may disclose them to the jury only if their probative value in helping the jury evaluate the opinion substantially outweighs their prejudicial effect.

FED. R. EVID. 703.

Rule 703 identifies three types of evidence upon which an expert's opinion may be based: (1) "firsthand observation of the witness"; (2) evidence presented at the trial; and (3) "data [presented] to the expert outside of court and other than by his own perception." FED. R. EVID. 703 advisory committee's note to 1972 proposed rules.

Although an expert's opinion is not admissible if it is speculative or mere guess work, the court should admit expert testimony if it has a reasonable factual basis. *See United States v. Ramer*, 883 F.3d 659, 680 (6th Cir. 2018) (quoting *United States v. L.E. Cooke Co.*, 991 F.2d 336, 342 (6th Cir. 1993)). In such a circumstance, "any remaining challenges merely go to the weight, as opposed to the admissibility, of the expert testimony." *Id.* (citing *In re Scrap Metal Antitrust Litig.*, 527 F.3d 517, 530 (6th Cir. 2008)). Federal Rule 703 allows an expert witness to testify to an opinion that is supported by inadmissible hearsay evidence. *United States v. Scott*, 716 F. App'x 477, 485 (6th Cir. 2017) (unpublished).

A remaining difficulty in expert-opinion cases is whether "the analysis of a specific application is a question of weight for the jury or a question of admissibility for the judge." Shelley Storer, Note, *The Weight Versus Admissibility Dilemma: Daubert's Applicability to A Method or Procedure in A Particular Case*, 1998 U. ILL. L. REV. 231, 233 (1998). Admissibility, the more difficult inquiry, hinges on an amalgam of experts' qualifications, the topic of discussion, the basis of the experts' knowledge on that topic, and the reliability of the methodology that the experts

applied in reaching their opinions. But if the court finds that it is more likely than not that the experts have reliably applied the underlying methodology to the facts of the case, then any argument contesting the substance of the experts' opinion is a matter for the jury to decide: the evidence's "weight," in a word.

III.

Defendants filed a motion in limine seeking to exclude the opinion testimony of Juston L. Smithers, Dr. Kirill Levchenko, Dr. Venkatesh Shankar, and Edward M. Stockton. ECF Nos. 339 (filed under seal); 344. Plaintiffs responded, ECF Nos. 392; 393 (filed under seal); 396, and Defendants replied, ECF Nos. 405 (filed under seal); 406.

The testimony of Juston Smithers will be discussed first, *infra* Section III.A, then the testimony of Kirill Levchenko, *infra* Section III.B, followed by Dr. Venkatesh Shankar's testimony, *infra* Section III.C, concluding with Edward Stockton's testimony, *infra* Section III.D.

A.

Defendants seek to preclude the testimony of Juston Smithers, Plaintiffs' expert on emissions testing using PEMS and chassis dynamometers.¹ Specifically, Defendants assert that

¹ A portable emissions measurement system ("PEMS") test "measures the gaseous emissions from a vehicle, including NO_x and PM. Being portable, the device can test emission levels during normal, on-road driving." *Rickman v. BMW of N. Am.*, No. CV 18-4363, 2019 WL 2710068, at *4 (D.N.J. June 27, 2019). "The critical distinction between PEMS and chassis dynamometer testing, then, is that the PEMS can operate during normal driving, while the chassis dynamometer operates only in a simulated, laboratory setting." *Id.* Some scholars have argued that the EPA's dated emissions testing would "be improved using [PEMS]." Alexandria E. Pierce, Comment, *If It Ain't Broke: The Case Against "Rolling Back" Vehicle Emissions Regulations in the United States*, 33 EMORY INT'L L. REV. 619, 624 (2019). Indeed, some consent decrees stemming from emissions scandals "require vehicle emissions in-use testing using a [PEMS], some of which must be conducted by an independent third party." John C. Cruden, Bethany Engel, Nigel Cooney & Joshua Van Eaton, *Dieselgate: How the Investigation, Prosecution, and Settlement of Volkswagen's Emissions Cheating Scandal Illustrates the Need for Robust Environmental Enforcement*, 36 VA. ENV'T L.J. 118, 172–73 (2018). For more information on the EPA's emissions-testing protocols,

Juston Smithers's expert opinions are unreliable because (1) "they extrapolate from tests of one problematic vehicle"; (2) they "do not 'fit' the [legal] issues in this case or the named Plaintiffs' claims"; (3) "ignored inconvenient facts"; and (4) "opine about prior-generation diesel vehicles." ECF No. 344 at PageID.20706 (cleaned up).

1.

Juston Smithers received a Bachelor of Science in Chemical Engineering from the University of California, Berkley. ECF No. 337-10 at PageID.18526 (filed under seal). He is currently the Chief Technology Officer of 44 Energy Technologies Incorporated. *Id.* For this case, he tested a single 2015 Chevy Cruze diesel and a 2015 Cruze gasoline engine. *Id.* at PageID.18529.

Smithers tested the Chevy Cruze diesel with a chassis dynamometer and a PEMS. *Id.* at PageID.18546. According to his testing, he concluded that "the emissions quantified on the test cycles during the certification process are not representative of emissions in normal operation and use," and that "emissions are often as high as 36 times the relevant standard and in excess of emissions from the comparable gas vehicles" due to software manipulation. *Id.* at PageID.18531.

During Smithers's PEMS testing, he found that the diesel vehicle averaged 4.1 times the federal standard of NO_x emissions² in city driving conditions. *Id.* at PageID.18553. On the highway, the NO_x emissions were 2.4 times the federal standard on average. *Id.* at PageID.18555. The NO_x emissions were significantly higher than federal standards at low temperatures (15° F and lower) and high temperatures (90° F and higher). *Id.* at PageID.18562.

see Cary Coglianese & Jennifer Nash, *The Law of the Test: Performance-Based Regulation and Diesel Emissions Control*, 34 YALE J. ON REGUL. 33, 71–73 (2017).

² "Oxides of nitrogen (nitric oxide and nitrogen dioxide, collectively called NO_x) are of particular concern [in emissions] because NO_x pollution contributes to nitrogen dioxide, particulate matter in the air, and reacts with sunlight in the atmosphere to form ozone." ECF No. 337-10 at PageID.18527.

Smithers tested the chassis dynamometer by conducting multiple EPA tests and the FTP-75, HWFET, and Cold CO test cycles. *Id.* at PageID.18570. In his report, he states that the results from the dynamometer testing “confirm that the vehicle is in proper working order and that the emission control systems are functioning as designed.” *Id.* Smithers believes that the PEMS test demonstrates GM’s use of “defeat devices”—which he defines as “‘an auxiliary emission control device (AECD) that reduces the effectiveness of the emission control system under conditions which may reasonably be expected to be encountered in normal vehicle operation and use’ and also (1) was not substantially included in the Federal Test Procedure, (2) was not justified for protection of the vehicle against damage or accident, or (3) went beyond the requirements of engine starting.” *Id.* at PageID.18571 (first quoting 40 C.F.R. § 86.1803-01; and then citing 40 C.F.R. § 86.1809-10).

He finds that GM used three defeat devices: an online-dosing defeat device (which treats emissions after they exit the engine) and both high-ambient and low-ambient temperature defeat devices (which treat emissions before they leave the engine).

According to Smithers, GM used two “dosing strategies” to regulate NO_x emissions: model dosing and online dosing. Dosing strategies are “meant to achieve the proportional injection” of NO_x and diesel exhaust fluid (DEF) in the selective catalytic reduction (SCR) aftertreatment system. The SCR system treats NO_x and other emission pollutants after they leave the engine system but before they are released through the tailpipe. *Id.* at PageID.18575. Simply put, dosing is “designed to reduce engine-out emissions of NO_x with a high degree of effectiveness.” *Id.* at PageID.18572–73. Mr. Smithers argues that “GM and Bosch use online dosing in many circumstances where it is not technically justified [and do so] as a means of reducing consumption

of DEF and extending the DEF tank refill interval,” which results in higher NO_x emissions. ECF No. 337-6 at PageID.18573 n.357 (filed under seal).

Smithers contends that GM should have identified its online dosing to regulators as an EI-AECD:

The strategy [of GM’s EI-AECD] is designed not by the limits of the chemistry and physics of the system but rather by the particular timing and features unique to the US06 [test] in order to avoid a significant impact on NO_x emissions, and the strategy is tailored in such a way that online dosing duration is far longer in real world driving, with resulting excessive emissions.

Id.

Smithers also explains that the Cruze does not calculate ambient-air temperature directly but “rather calculate[s] [it] based on the intake air temperature and [a] computer model that accounts for other parameters.” *Id.* at PageID.18613. Smithers ultimately reported higher NO_x emissions from higher and lower ambient temperatures than what the model calculated.

2.

Smithers’s reliance on a PEMS test of a single test vehicle meets industry standards. Indeed, in obtaining a Certificate of Conformity for the diesel Cruzes, GM also tested a single vehicle. Defendant GM also relied on one vehicle’s PEMS test not only for an internal assessment after the *Volkswagen* scandal but also to report results to the EPA in response to this suit. Sarah Funk, Defendant GM’s Rule 30(b)(6) designee on PEMS testing, testified that Defendant GM conducted a “read-across” PEMS study to collectively assess the emissions of every GM vehicle—including the diesel Cruze. *See* ECF No. 393-8 at PageID.34602–06 (filed under seal). The single-vehicle PEMS test was done at the request of a GM “internal review board” governing its compliance policy for vehicle emissions. *Id.* at PageID.34609–10; *see also* ECF Nos. 393-5 at PageID.34257 (filed under seal); 393-9 at PageID.34619–28 (filed under seal). Moreover, though

Defendant GM’s single-vehicle PEMS test covered approximately 103 miles, *see* ECF Nos. 393-5 at PageID.34257–58 (filed under seal); 393-9 at PageID.34619–28 (filed under seal), Smithers conducted hundreds of PEMS tests spanning several months and thousands of miles, ECF No. 393-3 at PageID.34009–10 (filed under seal). And GM’s claim about Smithers’s test car being defective fails because many of its test cars were defective in the same way. *See* ECF No. 393-4 at PageID.34155–62, 34160 & n.15 (filed under seal). If testing a single vehicle satisfies Defendants and the EPA, then it is difficult to understand why it is not satisfactory for Plaintiffs, too.

Smithers’s testing “fits” the issues in this case. The four cases that Defendants cite do not require excluding Smithers’s opinions. Neither *Rickman* nor *Bledsoe* establish a rule that requires the testing of multiple vehicles in all circumstances or that requires an expert to test a specific plaintiff’s vehicle. *See generally Rickman v. BMW of N. Am.*, 2019 WL 2710068 (D.N.J. June 27, 2019); *Bledsoe v. FCA US LLC*, 307 F. Supp. 3d 646 (E.D. Mich. 2018). In *American Honda Motor Co. v. Allen*, the court excluded expert testimony based on testing of a single motorcycle. 600 F.3d 813, 818 (7th Cir. 2010) (*per curiam*). But the alleged defect in *American Honda* was a mechanical issue with the steering-column bearings in motorcycles, and testing a single motorcycle was inapt because different motorcycles “handle[d] and manifest[ed] the wobble problem differently, and [were] known to vary with the rider and road conditions.” *See id.* at 814, 818. By contrast, this case involves the diesel Cruze’s software and calibration functions, which seem unlikely to operate or to err depending on the driver or road condition. Finally, in *Dow v. Rheem Manufacturing Co.*, this Court excluded an expert’s testimony because “he did not even attempt to test his theory,” and conceded that “any such tests would be essentially meaningless—there are too many uncontrolled variables.” No. 09-13697-BC, 2012 WL 1621368, at *8 (E.D.

Mich. May 9, 2020). That case has no relevance to or bearing on the issues here, as Smithers conducted extensive tests.

Defendants also challenge Smithers's comparison between the diesel Cruze and the 1973 Chevy Vega. In his report, Smithers notes that the 1973 Vega was certified to a CARB NO_x standard of 2,100 mg/mile, which is lower than the 2,199 mg/mile that the diesel Cruze emits at temperatures as low as 92.6°F in city conditions. ECF No. 345-1 at PageID.22361–62, 22440 (filed under seal). Defendants have identified no substantive reason to justify excluding Smithers's Vega–Cruze comparison. Contrary to Defendants' characterization, Smithers is not “opining” about the emissions standards in 1973. Rather, he is reporting what the NO_x standard was in 1973 based on publicly available regulatory information, and he is providing an example of a vehicle certified to that standard. His comparison of the 1973 Vega's NO_x standard with the diesel Cruze's measured performance provides important context. Without such context, a non-engineer would likely not understand whether 2,100 mg/mile is a large or small amount of NO_x. But lay people would understand that emissions-control technologies have improved significantly since 1973. So the Vega-Cruze comparison would help to translate an otherwise arbitrary NO_x-emissions number into a concept that a non-engineer could more readily grasp. In other words, Smithers's testimony would aid the jury in understanding an otherwise opaque subject.

For these reasons, Defendants' *Daubert* Motion, ECF No. 344, will be denied as to Juston Smithers.

B.

Defendants next seek to preclude the testimony of Dr. Kirill Levchenko. Specifically, Defendants assert that Dr. Levchenko's expert opinions are unreliable because he (1) “is not

qualified to opine about automotive engineering”; and (2) “applied no discernible methodology to reach [his] conclusion[s].” ECF No. 344 at PageID.20707, 20746 (cleaned up).

1.

Doctor Kirill Levchenko, Plaintiffs’ software expert, is an Associate Professor at the University of Illinois at Urbana-Champaign and works in the Department of Electrical and Computer Engineering. ECF No. 339-2 at PageID.19577 (filed under seal). He earned his Ph.D. in Computer Science and Engineering in 2008 from the University of California, San Diego, focusing on “networking, computer security and related technologies.” *Id.* He formed two opinions based on software documentation from GM and calibration data from Bosch.

His first opinion is that the software in the diesel Cruze measures temperature in a way that produces “lower NO_x emission during the test than under real-world driving conditions”:

[T]he vehicles do not measure ambient air temperature directly. Instead, they estimate the outside air temperature using several other sensors, including temperature sensors in other parts of the engine. The ECU software in the 2014 Chevy Cruze diesel cars is biased to produce lower temperature estimates during a high-temperature SC03 test cycle when that cycle is carried out within 5 hours of being operated at normal ambient temperatures. Because exhaust gas recirculation is reduced at temperatures above 30 °C, and turned off at temperatures above 42 °C, keeping the outside air temperature estimate artificially low during the SC03 test causes the 2014 Chevy Cruze diesel vehicles to produce lower NO_x emissions during the test than under real-world driving conditions that are otherwise equivalent to the test.

Id. at PageID.19576 (emphasis omitted). According to Dr. Levchenko, “[m]odeled ambient temperature is lower during the SC03 test because of a combination of *three* mechanisms that appear to have been intentionally abused by [a GM or Bosch employee] in response to concerns over increased NO_x emissions during SC03 testing.” *Id.* at PageID.19586–87 (emphasis added). The “modeled outside air temperature is smoothed using a low-pass filter” through which “the time constant for a decreasing temperature is 3 seconds, while the time constant for increasing

temperature is over 1073.7 seconds.” *Id.* That system allows the model to adjust slowly to a higher temperature during the SC03 testing. *Id.* Then the “ECU is configured to store the current modeled temperature in non-volatile memory” so that “it initializes its modeled temperature estimate to the stored value from the previous operating cycle if the previous cycle was fewer than 5 hours ago.” *Id.* at PageID.19587–88. That is relevant because “the SC03 test takes place within 2 hours of FTP/HWFET/US06 testing,” which is conducted at a lower ambient temperature than the SC03 test. *Id.* Finally, the low-pass filter stops when the vehicle speed is below 34.2 mph. *Id.* “Because 79% of the SC03 test is at speeds below this threshold, the model only updates for 126 seconds during the 600-second test. Combined with the time constant and memory mechanisms, this keeps the model reporting substantially lower ambient temperatures.” *Id.*

Doctor Levchenko’s second opinion concerns the diesel Cruze’s dosing strategies:

At any given time, the vehicle calculates the amount of DEF it needs to use using either the normal dosing or the online dosing formula. However, the online dosing formula limits the NO_x conversion efficiency to at most 65%, leading to increased NO_x emissions. Moreover, 2014 Chevy Cruze diesel vehicles switch to online dosing when the amount of NO_x entering the SCR system increases above 22 mg/s and does not leave online dosing mode until the amount of NO_x entering the SCR system falls below 7.5 mg/s.

Id. at PageID.19577.

As indicated, Dr. Levchenko’s opinions are limited to the software and coding in the ECU controlling system—work that directly grows from his peer-reviewed research on emissions cheating systems, as well as his years of software research and analysis. ECF No. 393-13 at PageID.34689–90 (filed under seal). He is well qualified to opine on such matters.

2.

Similarly, Dr. Levchenko’s methodologies are scientifically sound. Using a similar methodology to what he applied to identify Volkswagen’s emissions cheating software, Dr.

Levchenko analyzed the software-calibration files for the ECUs installed in the diesel Cruze. *Id.* at PageID.34692–93.

Doctor Levchenko analyzed the software for the diesel Cruze’s EDC17 ECUs, which controls the emissions systems, and he identified calibration values in the software that describe what Smithers observed during his PEMS testing. In this way, Doctor Levchenko’s software analysis independently corroborates Smithers’s opinion testimony.

Contrary to Defendants’ argument, Dr. Levchenko does not opine that the “online dosing mode of the Cruze’s [exhaust after treatment] system is improperly designed to reduce DEF consumption.” ECF No. 339 at PageID.19341 (filed under seal); *see also* ECF No. 393 at PageID.33826–27 (filed under seal). He merely identifies and explains the calibration values that Defendants programmed into the diesel Cruze. ECF No. 393-1 at PageID.33897–98 (filed under seal). Defendants do not contend that Dr. Levchenko is unqualified to opine on the operation of the vehicle’s software or calibration values. And as explained above, such an argument would fail.

Courts do not require experts to be specialists in every subject to which their testimony might relate—they must simply have expertise that would help a jury understand the expert’s testimony. *Buren v. Crawford Cnty.*, 2016 WL 5369597, at *2 (E.D. Mich. Sept. 26, 2016); *see also Surles ex rel. Johnson v. Greyhound Lines, Inc.*, 474 F.3d 288, 294 (6th Cir. 2007) (holding that a threat-assessment expert could testify in the specialized area of commercial-bus-line threat assessment); *Dickenson v. Cardiac & Thoracic Surgery of E. Tenn.*, 388 F.3d 976, 979 (6th Cir. 2004) (holding that a cardiac surgeon could testify about when to remove a ventilation tube).

Doctor Levchenko’s testimony would aid the jury by identifying the precise features of Defendants’ ECU software that, as Smithers intends to demonstrate, caused the diesel Cruzes to behave differently during real-world driving than during emissions testing. Having testimony from

an opinion witness on software (Dr. Levchenko) and automotive engineering (Juston Smithers) would allow the jury to draw from expertise in both domains and better understand their testimony.

Rule 702 encourages such testimony. *See, e.g., Knight v. Boehringer Ingelheim Pharms., Inc.*, 323 F. Supp. 3d 837, 847 (S.D. W. Va. 2018) (“A single expert’s opinion cannot be analyzed in a vacuum, devoid of the meaningful context of issues presented and a party’s other evidence and experts.”); *In re Ethicon Inc. Pelvic Repair Sys. Prod. Liab. Litig.*, 2017 WL 6346633, at *3 (S.D. W. Va. Dec. 12, 2017) (“A single expert need not provide all the pieces of the puzzle for their testimony to be useful to the jury in determining the ultimate issues in the case.” (citing *Huskey v. Ethico, Inc.*, 29 F. Supp. 3d 691, 710 (S.D. W. Va. 2014))); *Calvert v. Ellis*, No. 2:13-CV-00464, 2015 WL 732523, at *2 (D. Nev. Feb. 20, 2015) (“Courts frequently permit multiple experts to opine on similar issues where each expert’s credentials and expertise differ. Providing the jury with perspectives from experts of different fields is often helpful to the jury.” (citing *Johnson v. United States*, 780 F.2d 902 (11th Cir. 1986))).

Defendants have “not explained how any novel or exotic principles” of automotive engineering should preclude Dr. Levchenko from testifying to this subject. *See In re FCA US LLC Monostable Elec. Gearshift Litig.*, 382 F. Supp. 3d 687, 700 (E.D. Mich. 2019) (holding that a human-factors engineer was qualified to testify about a car’s design despite not being an automotive engineer).

Defendants also challenge Dr. Levchenko’s three uses of the term “cycle-beating.” Defendants claim that Dr. Levchenko may not use the term “cycle-beating” because he did not testify at deposition that its definition is well accepted within the scientific community. *See* ECF No. 339 at PageID.19342 (filed under seal); *see also* ECF No. 393 at PageID.33828 (filed under seal).

Doctor Levchenko used that term once to describe the kind of strategies that he sought to identify and twice to describe the overall effect of the strategies. He explained that he used the term in its common-sense meaning to refer to “a mechanism that allows the vehicle to perform more favorably with respect to emissions on an emissions test cycle than it would under similar conditions in real-world driving.” ECF No. 393-13 at PageID.34691 (filed under seal).

Nothing in Rule 702 prohibits an expert from using a term’s ordinary meaning.³ Moreover, Defendants’ expert, Ryan Harrington, offers an opinion on whether the diesel Cruze’s emissions-control system is “cycle-beating.” ECF No. 393-5 at PageID.34375 (filed under seal) (“GM testing data demonstrate that the OAT Model does not include cycle detection or cycle-beating features.” (cleaned up)). It is well established that the “offering of similar evidence by the objector” waives objection to the admissibility of evidence. 1 MCCORMICK ON EVIDENCE § 55 (Robert P. Mosteller et al. eds. 8th ed. 2020) (collecting cases). A party is not “permitted ‘to blow hot and cold’ in this way.” *Id.* at n.20. Thus, Defendants waived any objection to Plaintiffs’ expert using the term “cycle-beating” when it offered an expert who did the same. Consequently,

³ When a term has a common meaning, an expert’s use of that term will not “necessarily [] be prejudicial or [] confuse the jury.” *Sadler v. Advanced Bionics, LLC*, 2013 WL 1340359, at *4 (W.D. Ky. Apr. 1, 2013). Significantly, Defendants do not argue or suggest that Dr. Levchenko’s use of the term “cycle eating” is substantively unsound. Cycle-beating is not a scientific term of art. Engineers routinely use the term in peer-reviewed articles in the same way that Dr. Levchenko did. *See, e.g.,* P.K. Senkal & Felix Leach, *Diversity in Transportation: Why a Mix of Propulsion Technologies is the Way Forward for the Future Fleet*, RESULTS IN ENG’G, Dec. 2019, at 1, 4. Indeed, Dr. Levchenko uses the term in his report in the same sense that he has used it in his peer-reviewed published research on emissions cheating. *See generally* Levchenko et al., *How They Did It: An Analysis of Emission Defeat Devices in Modern Automobiles*, PROC. IEEE SYMP. ON SEC’Y & PRIV. (2017), at 231, 231. Moreover, Doctor Levchenko did not create his definition of “cycle beating” for this case; it “grow[s] naturally and directly out of [his] own research.” *Mike’s Train House, Inc. v. Lionel, LLC*, 472 F.3d 398, 408 (6th Cir. 2006), *abrogated on other grounds by A.K. ex rel. Kocher v. Durham Sch. Servs., L.P.*, 969 F.3d 625, 629 (6th Cir. 2020).

Dr. Levchenko may define and use the term “cycle-beating” according to its common-sense meaning.

For these reasons, Defendants’ *Daubert* Motion, ECF No. 344, will be denied as to Dr. Kirill Levchenko.

C.

Defendants next seek to preclude the testimony of Dr. Venkatesh Shankar, Plaintiffs’ marketing expert. Specifically, Defendants assert that Dr. Shankar’s expert opinions are unreliable because they (1) “are not based on reliable methodology”; and (2) “do not ‘fit’ the issues in this case.” ECF No. 344 at PageID.20707 (cleaned up).

1.

Doctor Shankar concludes that Defendants conducted a significant and widespread marketing campaign for the diesel Cruze, emphasizing the Clean Turbo Diesel model and engine. In addition to the extensive advertising associated with the diesel Cruze, he finds that Defendants also emphasized the bundle of power and performance, fuel efficiency, and environmental friendliness as attributes (i.e., themes) of the diesel Cruze. And based on his review of internal consumer surveys, sales analyses conducted by Defendants’ personnel, and a review of the content of Defendants’ advertising, Dr. Shankar concluded that GM’s key marketing messages for the diesel Cruze were fuel economy, performance, and environmentally friendly technology.

Part of the basis for Dr. Shankar’s opinions is a qualitative content analysis of GM’s advertisements. Content analysis “involves the systematic observation and description of communication materials, such as advertisements. . . . This methodological technique is widely used in the social sciences, including . . . communication, and marketing.” *See* Joshua E. Perry et al., *Direct-to-Consumer Drug Advertisements and the Informed Patient: A Legal, Ethical, and*

Content Analysis, 50 AM. BUS. L.J. 729, 778 n.103 (2013). Generally, such qualitative content analyses are reliable. *See, e.g., In re Urethane Antitrust Litig.*, 2012 WL 6681783, at *2 n.1 (D. Kan. Dec. 21, 2012) (“Dow has not provided any authority that qualitative analyses are not reliable, and this Court has previous rejected challenges based on a lack of empirical studies as relating to the weight of the evidence and not the admissibility.”), *aff’d*, 768 F.3d 1245 (10th Cir. 2014). In other words, content marketing analysis is not junk science.

Defendants repeatedly assert that this Court may not find any credibility in empirical analyses that are not grounded in the “scientific method.” *See* ECF No. 344 at PageID.20734, 20748–49, 20752–54 & n.42, 20756–57. Yet the “scientific method,” as endorsed by the Supreme Court in *Daubert*, merely refers to a series of processes that can “appropriate[ly] validate” proposed testimony. *See Daubert*, 509 U.S. at 590. And to the extent that Defendants argue that expert testimony *must* be based on certain empirical methods, the Sixth Circuit has expressly rejected that proposition. *See, e.g., United States v. LaVictor*, 848 F.3d 428, 443–44 (6th Cir. 2017). Indeed, Rule 702 “does not limit the subject matter of expert testimony to scientific or technical evidence,” and “the district court is not bound by any explicit test when determining reliability.” *Id.* at 443; *see First Tenn. Bank Nat’l Ass’n v. Barreto*, 268 F.3d 319, 334 (6th Cir. 2001) (holding that the lack of empirical analysis “does not render [expert opinions] unreliable and inadmissible”).

An expert may rely on qualitative methods used for social sciences, like advertising. *See Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 152 (1999) (“The objective of [*Daubert*’s gatekeeping] requirement is . . . to make certain that an expert, *whether basing testimony upon professional studies or personal experience*, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field.” (emphasis

added)); *see, e.g., Beastie Boys v. Monster Energy Co.*, 983 F. Supp. 2d 354, 364–65 (S.D.N.Y. 2014) (“‘Technical . . . or other specialized knowledge,’ may be relevant and reliable, and therefore admissible under *Daubert*, even if the field of knowledge, be it marketing or plumbing, does not readily lend itself to a formal or quantitative methodology.” (internal citation omitted)); *Park W. Radiology v. CareCore Nat’l LLC*, 675 F. Supp. 2d 314, 327 (S.D.N.Y. 2009) (finding that an expert opinion based on qualitative evidence and not empirical analyses or quantitative findings was reliable and would assist the trier of fact); *see also United States v. Simmons*, 470 F.3d 1115, 1123 (5th Cir. 2006) (upholding the district courts’ authority to admit testimony regarding “areas of expertise, such as the ‘social sciences in which the research, theories and opinions cannot have the exactness of hard science methodologies’” (citation omitted)); *Disney Enters. v. VidAngel Inc.*, No. CV1604109ABPLAX, 2019 WL 4544428, at *5 (C.D. Cal. May 29, 2019) (“[T]estimony is not excludable as unreliable or speculative or otherwise simply because it is qualitative instead of quantitative”); *Louis Vuitton Malletier S.A. v. Sunny Merch. Corp.*, 97 F. Supp. 3d 485, 507 (S.D.N.Y. 2015) (“[T]hat an analysis may be qualitative does not mean that it is unreliable for the purposes of *Daubert*.”).

2.

Courts evaluating the reliability of qualitative analyses and methods, like Dr. Shankar’s, “focus on the reliability of the expert’s personal knowledge or experience.” *Luna v. Bell*, 3:11-CV-00093, 2013 WL 12316066, at *5 (M.D. Tenn. Aug. 1, 2013); *accord Salter v. Olsen*, No. 18-CV-13136, 2020 WL 4331537, at *4 (E.D. Mich. June 8, 2020), *report and recommendation adopted sub nom. Salter v. City of Detroit*, No. 18-13136, 2020 WL 4284062 (E.D. Mich. July 27, 2020); *see also First Tenn. Bank*, 268 F.3d at 334 (“*Daubert* is ‘only of limited help’ in assessing technical or experiential expertise” (citation omitted)).

What matters is whether Dr. Shankar applied his experience to the facts of the case. Indeed, in some fields, “experience is the predominant, if not sole, basis for a great deal of reliable expert testimony.” *Thomas v. City of Chattanooga*, 398 F.3d 426, 432 (6th Cir. 2005). At a minimum, the expert must “explain how that experience leads to the conclusion reached and how that experience is reliably applied to the facts.” *Id.* at 432. “A marketing professional’s review and analysis of company documents to extrapolate marketing strategies, coupled with the expert’s experience and background, may be enough to establish that the expert’s methodology is reliable.” *In re Tylenol (Acetaminophen) Mktg., Sales Practices & Prods. Liab. Litig.*, No. 2436, 2016 WL 807377, at *5 (E.D. Pa. Mar. 2, 2016) (collecting cases), *see also Louis Vuitton*, 97 F. Supp. 3d at 505 (“[T]hat Mulhern’s testimony is qualitative, rather than quantitative, does not mean that it must be excluded.”).

Doctor Shankar’s methodology is reliably based on his professional experience. He testified about how his 30 years of experience in the marketing industry and academia applied to the facts of this case. ECF No. 393-14 at PageID.34701–02, 34717–19, 34733–35, 34751–53 (filed under seal). His report and curriculum vitae also reflect that his experience and expertise in marketing academia—including experience with automotive advertising—appropriately inform his content analysis and his ultimate selection of visual themes and words. *See* ECF No. 393-15 at PageID.34759–60 (filed under seal).

3.

Doctor Shankar’s content analysis is also reliable. He did not rely on a reduced sample set of all available advertising data, nor was he required to do so. Defendants’ first argument to exclude Dr. Shankar’s opinions focuses on the representativeness of the advertisements that he reviewed. But issues with sample size go to the weight, not the admissibility, of expert evidence.

See Kanuszewski v. Shah, No. 1:18-CV-10472, 2022 WL 327710, at *3 (E.D. Mich. Feb. 3, 2022). Further, no sampling was required because the universe of available advertisements was minuscule compared to other matters in which he has participated. ECF No. 393-14 at PageID.34709 (filed under seal). Even so, Dr. Shankar’s content analysis was intended to analyze predominant themes in Defendants’ advertising, not to opine on the percentage of the advertisements that consumers viewed. *Id.*

Defendant first argues that Plaintiffs’ counsel “may have” cherry-picked documents for Dr. Shankar to review. ECF No. 344 at PageID.20750–51 & n.37. But the record does not demonstrate that Plaintiffs’ counsel made any such selections. And Plaintiffs have not identified any advertisements that it claims that Dr. Shankar could have, but did not, consider. Defendants also assert that some of the 33 GM advertisements that Dr. Shankar reviewed were “drafts.” *Id.* at PageID.20749–52, 20758. But Defendants identify no evidence demonstrating that GM materially altered or did not use those advertisements in its campaign. Thus, even though GM is the master of its advertising records, it cites no evidence to support its claim that “most” or “at least half of the 33 ads were drafts,” *id.* at PageID.20750, 20758, much less that any of them were substantially different when Dr. Shankar reviewed them.

A closer read of Dr. Shankar’s testimony tells a different story. Doctor Shankar testified that “when something is called an ad, the generally accepted definition in marketing is that that ad is being produced and used [by the company].” ECF No. 393-14 at PageID.34713–14 (filed under seal) (“When I received the ad there was no information saying that this was not run . . . so in the absence of that, the understanding is these—these are the ads that were implemented.”).

For these reasons, his review of the ads is reliable.

4.

Defendants also argue that Dr. Shankar's sample differed from the content analysis that he conducted in another diesel-emissions case in which he used random sampling and characterized it as a methodologically sound procedure. *See* ECF No. 344 at PageID.20751–52, 20754 n.42. But, as Dr. Shankar testified, those two cases had “very different” objectives, as the other case involved different brands and a much larger universe of advertisements, thus, requiring random sampling. *See In re Chrysler–Dodge–Jeep EcoDiesel Mktg., Sales Practices & Prods. Liab. Litig.*, No. 3:17-md-02777 (N.D. Cal. filed Apr. 5, 2017); ECF No. 393-14 at PageID.34703–04, 34706, 34709–10 (filed under seal). Indeed, Dr. Shankar testified not only that this case involved fewer ads and a single brand, but also that he performed a qualitative content analysis focused not on obtaining a representative sample but on determining the themes of Defendants' advertisements. *See* ECF No. 393-14 at PageID.34707–08, 34710 (filed under seal).

Likewise, Defendants' argument that Dr. Shankar relied on a “convenience sample,” ECF No. 344 at PageID.20752, is speculative and not substantiated by the record. Moreover, even if Dr. Shankar relied on a “convenience sample,” the lack of probability sampling does not render a qualitative analysis unreliable. *See* Patrick M. Bible, *Defining and Quantifying Dilution Under the Federal Trademark Dilution Act of 1995: Using Survey Evidence to Show Actual Dilution*, 70 U. COLO. L. REV. 295, 324–25 (1999) (“[T]he vast majority of researchers in the fields of . . . behavioral and social sciences accept non-probability survey techniques. Therefore, nonprobability sampling satisfies the requirements of Federal Rule of Evidence 703.”); *see also NFL Props. v. N.J. Giants, Inc.*, 637 F. Supp. 507, 517–18 (D.N.J. 1986) (noting that nonprobability studies are “the type of study employed in the vast majority of market research and relied upon by experts in the field,” and that such surveys should be given “substantial weight”);

Jacob Jacoby & Amy H. Handlin, *Non-Probability Sampling Designs for Litigation Surveys*, 81 TRADEMARK REP. 169, 173, 175 (1991) (concluding that nonprobability designs are used more than 97% of cases in commercial advertising, marketing, and consumer research, and that scholars rely on nonprobability sampling 94% of the time in empirical literature in social and behavioral sciences).

Defendants cite noncontrolling legal authority to argue that Dr. Shankar's test samples are unreliable because they do not properly represent the target demographic and were selectively chosen. ECF No. 344, PageID.20750–51 & n.37 (citing *Tyree v. Boston Sci. Corp.*, 54 F. Supp. 3d 501, 530 (S.D. W. Va. 2014); *In re Pella Corp. Architect & Designer Series Windows Mktg., Sales Pracs. & Prods. Liab. Litig.*, 214 F. Supp. 3d 478, 493 (D.S.C. 2016)). But those cases did not involve a qualitative analysis from the social sciences, for which a scientifically valid method (in the “hard sciences” sense) is not required. *See First Tenn. Bank Nat'l Ass'n v. Barreto*, 268 F.3d 319, 334 (6th Cir. 2001). Even so, courts in this circuit generally find that such issues concern the weight of the evidence, not its admissibility. *See, e.g., Whirlpool Props. v. LG Elecs. U.S.A., Inc.*, No. 1:03 CV 414, 2006 WL 62846, at *4 (W.D. Mich. Jan. 10, 2006) (“Selection of an inappropriate universe generally affects the weight of the resulting data, not its admissibility.” (citation omitted)).

For those reasons, Defendants' argument about Dr. Shankar's test samples fails.

5.

Defendants argue that Dr. Shankar's “content analysis” amounts to “pure ipse dixit,” and that Dr. Shankar “imposed his own *subjective, personal assessment* onto the process.” ECF No. 344 at PageID.20753–56. As explained earlier, content analyses are an accepted norm in the field. And Doctor Shankar explained that he used a qualitative content analysis and based his opinion

on, among other things, marketing research, his expertise and experience, and advertisements that Defendants supplied. ECF No. 393-15 at PageID.34760 (filed under seal). He also described his methodology in detail, revealed the facts on which he based his conclusions, and explained the reasoning employed to reach them. *Id.* at PageID.34760–85.

Defendants’ argument goes to the weight of Dr. Shankar’s opinions, not to their admissibility. *See Schechner v. Whirlpool Corp.*, No. 2:16-CV-12409, 2018 WL 6843305, at *10–11 (E.D. Mich. Oct. 30, 2018) (“[A]rguments about the coding of Simonson’s survey results properly challenge the weight of his opinions, but not their admissibility.”), *aff’d*, 2019 WL 978934, at *14 (E.D. Mich. Feb. 28, 2019); *United States v. 400 Acres of Land*, No. 215CV01743MMDNJK, 2017 WL 4797517, at *8 (D. Nev. Oct. 24, 2017) (“Technical inadequacies, including improper or anomalous coding, bear on weight, not admissibility.” (citation omitted)), *vacated in part on other grounds*, 2019 WL 4120802 (D. Nev. Aug. 29, 2019), *aff’d sub nom. United States v. Cox*, No. 21-15066, 2022 WL 524363 (9th Cir. Feb. 22, 2022).

As a marketing expert with over 30 years of experience, Dr. Shankar may opine on the contents of advertising and select relevant criteria for a reliable content analysis. His experience and expertise properly informed his analysis. ECF Nos. 393-14 at PageID.34717–19, 34733, 34751–53 (filed under seal); 393-15 at PageID.34760 (filed under seal). “A marketing professional’s review and analysis of company documents to extrapolate marketing strategies, coupled with the expert’s experience and background may be enough to establish that the expert’s methodology is reliable.” *Tylenol*, 2016 WL 807377, at *5 (collecting cases); *see also* discussion *supra* Section I.D.2. Doctor Shankar explained how his 30 years of experience in the marketing industry and academia applied to the facts of the case. ECF No. 393-14 at PageID.34701–02, 34719, 34733–35, 34751–53 (filed under seal). His report and curriculum vitae reflect his

experience and expertise. ECF No. 393-15 at PageID.34759–60 (filed under seal). His experience in marketing academia—including experience with advertising in the automotive industry—are reliable bases for his content analysis and selection of visual themes and words.

As Dr. Shankar testified, content analysis has a subjective element to it because it is a qualitative methodology. ECF No. 393-14 at PageID.34731–32 (filed under seal). But that does not undermine the admissibility of his expert testimony. Further, the coding technique that he implemented for his content analysis, using three third-party coders that independently reviewed and coded the ads, minimized the possibility of subjectivity creeping into the analysis. *See* ECF Nos. 393-14 at PageID.34705, 34720–30, 34745–50 (filed under seal); 393-15 at PageID.34782 (filed under seal); *see also Louis Vuitton Malletier S.A. v. Sunny Merch. Corp.*, 97 F. Supp. 3d 485, 505 (S.D.N.Y. 2015) (rejecting the argument that qualitative expert testimony should be excluded because it was based on “subjective belief”).

For those reasons, Dr. Shankar’s subjective beliefs do not render his opinions inadmissible.

6.

Defendants’ final argument challenges Dr. Shankar’s interpretation of GM’s “extensive marketing” and use of a “diesel badge” on the diesel Cruze. ECF No. 344 at PageID.20756–58 (emphasis omitted).

But Dr. Shankar fully explained in his report and deposition how his extensive marketing and diesel-badge opinions rested on Defendants’ internal documents. *See* ECF Nos. 393-14 at PageID.34711–12, 34736–43 (filed under seal); 393-15 at PageID.34761, 34770, 34773–74, 34782, 34785 (filed under seal). Moreover, with respect to the extensiveness of the advertising, Dr. Shankar cited GM’s effectiveness study of its Olympic ad, which is particularly illustrative because Defendants surveyed its effectiveness. ECF No. 393-15 at PageID.34773–74 (filed under

seal). Doctor Shankar also explained that “GM also garnered the highest gross rating point (GRP) and achieved brand linkage.” *Id.* at PageID.34473–74. In addition to citing internal GM communications, Dr. Shankar analyzed the link between advertising and resulting sales. *See id.* Defendants do not contend that the analysis that he cited is flawed. Further, with respect to the diesel badge that Defendants used on the diesel Cruze, Dr. Shankar relied on an internal GM consumer survey that found that the diesel badge was important to consumers. *Id.* at PageID.34770. Defendants do not even suggest that the survey was flawed. Doctor Shankar analyzed that survey in the context of GM’s advertising and applied his knowledge and experience to conclude that (1) the badge was prominently featured on the vehicle and in advertising; and (2) the badge was meant to convey the themes consistent with the advertising, such as environmental friendliness. *Id.*

For those reasons, Dr. Shankar’s interpretations are admissible.

D.

Defendants seek to preclude the testimony of Edward Stockton. Specifically, Defendants assert that Edward Stockton’s expert opinions are unreliable because they (1) “do not measure legally cognizable damages”; (2) “are based on unsupported assumptions”; and (3) “suffer[] from methodological flaws.” ECF No. 344 at PageID.20707, 20763–81 (cleaned up).

1.

Edward Stockton is well qualified to opine on economic-damages models. He has a Bachelor of Arts in Economics from Western Michigan University and a Master of Science in Applied Econometrics from the University of Arizona. ECF No. 337-25 at PageID.19031 (filed under seal). He is the Vice President and Director of Economic Services at Fontana Group, Inc., a consulting firm located in Tuscon, Arizona. *Id.* at PageID.19002. He has more than a quarter of a

century of experience in economic analysis. *See id.* at PageID.19031. He has testified as an economic-loss expert in at least three other vehicle-defect cases, calculated the economic loss of a “false accounts” scandal involving a bank, and had an original economic-loss model adopted by the Northern District of California. *Id.* at PageID.19004–05. But his testimony reaches into hundreds of other cases. *Id.* at PageID.19032–47. And, in addition to at least six other publications, he authored a chapter about damages in dealership cases in *The Comprehensive Guide to Economic Damages*. *Id.* at PageID.19048.

In his expert report, Mr. Stockton employs three models to estimate the economic damages that Plaintiffs allegedly suffered: Direct Price Premium, Regression Pricing, and Retail Replacement Cost. ECF No. 346-36 at PageID.24436.

The first two models—Direct Premium Price (DPP) and Regression Pricing (RP)—are “overpayment models” that purport to “determine the additional prices charged for the [diesel Cruze]” with certain “adjustments for differences between [unrelated] vehicles . . . and for differences between list prices and transaction prices.” *Id.* Direct Price Premium compares the diesel Cruze to the gasoline-powered Cruze Eco for its analysis; Regression Pricing relies on “other vehicles within the Cruze’s competitive product segment (Intermediate Compact).” *Id.*

The third model—Retail Replacement Cost (RRC)—is “based upon a benefit of the bargain concept” by which damages are measured by the amount of “additional money that would be necessary for consumers to replace their current defective vehicles with comparable non-defective vehicles.” *Id.* In other words, as Plaintiffs state, Retail Replacement Cost measures “the value of a remedy that would have been available had the defect been disclosed.” ECF No. 390 at PageID.32017 (filed under seal) (emphasis omitted).

Mr. Stockton summarizes the estimated damages from his analysis as follows:

(1) Economic damages in 2019 dollars under the [DPP] Model are approximately \$2,337 for model year 2014 Class Vehicles and \$2,734 for model year 2015 class vehicles per vehicle.

(2) Under the [RP] model, economic damages in 2019 dollars are approximately \$2,834 for model year 2014 Class Vehicles and \$2,860 for model year 2015 Class Vehicles.

(3) The [RRC] model indicates damages of approximately \$3,489 per model year 2014 Class Vehicle and \$3,968 per model year 2015 Class Vehicle.

ECF No. 346-36 at PageID.24437.

2.

Edward Stockton's DPP and RP models measure Plaintiffs' cognizable damages.

Defendants first argue that there are no cognizable damages because Plaintiffs' alleged injury is not yet proven, and because the premium that Plaintiffs paid for the diesel Cruze was for the torque, performance, and fuel economy, which they presumably received. ECF No. 344 at PageID.20764–70.

But that interpretation mischaracterizes the models. Stockton's DPP and RP models account for the positive attributes of the class vehicles. *See* ECF No. 393-2 at PageID.33945 (filed under seal). Stockton opines that, as shown in the DPP and RP models, the positive attributes of the diesel Cruze did not incrementally contribute to market prices in the market in which the diesel Cruze's emissions characteristics were disclosed. ECF No. 393-18 at PageID.34990–91 (filed under seal). Thus, those models calculate a premium for the clean-diesel engine at the time of purchase—assuming that the defect had been disclosed. *Id.* As such, the models do not compensate Plaintiffs twice by giving them the benefits of the positive attributes of a clean-diesel engine with damages for the positive attributes of the clean-diesel engine in the form of a premium. ECF No. 344 at PageID.20769.

Defendants next argue that Stockton's models are irrelevant because he should have calculated the premium for the software that made the engine defective. *Id.* at PageID.20769.

But Plaintiffs did not have a choice in software. Plaintiffs chose between a gasoline or diesel powertrain, each of which included distinct bundles of related attributes. *See* ECF No. 393-17 at PageID.34877 (filed under seal). That is what Stockton modeled.

Defendants next assert that, under Stockton’s models, Plaintiffs could recover the entire premium for many parts, like a “broken key chain,” that are otherwise unavailable for purchase. ECF No. 344 at PageID.20771 n.53.

But Stockton calculated a premium at the point of purchase for only a defective clean-diesel engine. ECF Nos. 393-17 at PageID.34861 (filed under seal); 393-2 at PageID.33948 (filed under seal) (one of Stockton’s assumptions was that the emissions performance issue was a material condition); 393-2 at PageID.33948 (filed under seal) (defect was material to consumers and material in its design); 393-2 at PageID.33951 (filed under seal) (“I didn’t put forth a report that is based on the possibility that an emissions defect might be material. I’ve been asked to assume ... that this is a material defect.”); 393-2 at PageID.33952 (filed under seal) (“I did an economic study on the assumption that there was a material defect.”). Other material defects would require a separate economic analysis and data. ECF No. 393-2 at PageID.33952 (filed under seal) (“I had to approach it as an economic problem. . . . [T]here’s a lot of information that goes along with it.”). He did not model immaterial omissions, like a broken keychain. *Id.* at PageID.33950 (conceiving of “nondisclosures that are immaterial that wouldn’t result in any damages”).

Defendants also state that damages calculated under Stockton’s RPC model are speculative because they are based on hypothetical future transactions. ECF No. 344 at PageID.20763–64.

But the damages that Stockton calculates are not based on hypothetical occurrences. In the RRC model, Stockton assumes that Plaintiffs never received, and do not have clear prospects of receiving, the nondefective vehicles for which they bargained. ECF No. 393-17 at PageID.34860

(filed under seal). Accordingly, the value that Plaintiffs received from their diesel Cruzes is the trade-in value for “comparable non-defective vehicles.” *See id.* at PageID.34878. In this way, the intent of the RRC model is to place consumers where they would have been if they received the benefit of their bargain, at least for the remainder of the car’s life. ECF No. 393-2 at PageID.33971 (filed under seal). As indicated, the damages are based on “current” trade-in transaction prices when the Complaint was filed plus some time after to repair the alleged emissions defect. ECF Nos. 393-2 at PageID.33976 (filed under seal); 393-17 at PageID.34878–79 (filed under seal).

Stockton’s calculated damages are not speculative. He uses publicly available information and other reliable data to obtain the factors or inputs used in this model: trade-in costs, lost wages, etc. ECF No. 393-17 at PageID.34877–80 (filed under seal) (citing data from IHS Automotive, NADA/J.D. Power data, and other sources). The noncontrolling cases that Defendants cite to the contrary are inapt. *See McKay v. Federspiel*, No. 14-CV-10252, 2015 WL 1636638, at *5 (E.D. Mich. Apr. 13, 2018) (holding that damages were speculative because the plaintiff could not demonstrate that he was injured by the broad language of a governmental “Electronics Ban Order”), *aff’d*, 823 F.3d 862 (6th Cir. 2016); *Multimatic, Inc. v. Faurecia Interior Sys. USA, Inc.*, 358 F. App’x 643, 653–55 (6th Cir. 2009) (unpublished) (affirming the exclusion of expert testimony calculating lost profits because the methodology was speculative and untested).

Defendants also argue that Stockton’s damage models do not calculate damages for people who, like some Plaintiffs, (1) bought their vehicles used; (2) sold their vehicles; or (3) leased their vehicles. ECF No. 344 at PageID.20771.

But Stockton calculated the damages per vehicle. *See* ECF No. 393-2 at PageID.33956 (filed under seal) (“I’ve calculated one damage amount associated with each vehicle.”); *see also* ECF No. 393-17 at PageID.34858 (filed under seal) (providing economic damages for each model

year class vehicle “per vehicle”). In his depositions, Stockton explained that the damages were not limited to the initial purchaser. *See* ECF No. 393-2 at PageID.33955, 33966 (filed under seal); *see also* ECF No. 393-17 at PageID.34859 (filed under seal) (“For durable goods, such as motor vehicles, consumers . . . also consider the risk and uncertainty of that expected performance over time. . . . because . . . owners . . . consume the item’s value . . . over some extended period of time.”).

Further, allocation of the per-vehicle overpayment among class members is a post-certification issue of claims administration. Indeed, courts routinely allow the parties to allocate damages among class members after class certification. *See, e.g., In re Polyurethane Foam Antitrust Litig.*, No. 1:10 MD 2196, 2014 WL 6461355, at *46 (N.D. Ohio Nov. 17, 2014) (“[T]he damages methodology does *not* award damages; it *calculates* damages on a classwide basis. . . . Questions of allocation need not definitively be resolved now.”); *In re Flonase Antitrust Litig.*, 284 F.R.D. 207, 233 (E.D. Pa. 2012) (“[Defendant’s] other challenges to [plaintiffs’ damages expert’s] methodology ‘are concerns that relate primarily to the allocation of damages among individual class members, not to the computation of aggregate damages on a class-wide basis. . . . [I]ndividual damages allocation issues are insufficient to defeat class certification.’” (citations omitted)).

Defendants also argue that Rule 26’s expert-disclosure requirements preclude deferral of allocation calculations.

But the only case that Defendants cite was not a class action. *See Eiben v. Gorilla Ladder Co.*, No. 11-CV-10298, 2013 WL 1721677 (E.D. Mich. Apr. 22, 2013) (brought by a single plaintiff for injuries from a fall off a ladder that defendants manufactured and sold). Even so, Rule 26 protects the opposing party from prejudice due to late disclosures, not to ensure the perfect

disclosure of all information, including the allocation of damages. *See id.* at *6–7. Here, there is no risk of such prejudice. Stockton’s models calculate the total damages that Defendants might be responsible for if the class is certified and awarded damages: X amount per vehicle. How those damages will be distributed among the class members who owned the same vehicle at different times will not affect Defendants’ exposure. And there is no reason to treat the lessees differently than other owners of multi-owner vehicles for the purpose of calculating damages with the overpayment models.

Defendants’ final argument about damages is that Stockton’s models measure damages “at the point of purchase” even though the lessees did not “purchase” their cars. *See* ECF No. 344 at PageID.20772–73.

But a lease is a purchase of the use of the car for a specified period and, therefore, is based on the market value of the vehicle at the time of the transaction. *See* ECF No. 393-2 at PageID.33967–68 (filed under seal) (“Q. Is it fair to say MSRP does not directly apply to the purchase price of a leased vehicle? A. It does actually. Q. And how does it? A. The lease residuals are set at the—at a percentage of MSRP.”).

For those reasons, Defendants’ arguments against Stockton’s damages measurements are unpersuasive.

3.

Edward Stockton’s models are based on reliable data that other experts have used: the factual record, basic economic principles, and industry-standard data. “An expert’s opinion, whe[n] based on assumed facts, must find some support for those assumptions in the record. However, mere weaknesses in the factual basis of an expert witness’ opinion bear on the weight of the evidence rather than on its admissibility.” *McLean v. 988011 Ont., Ltd.*, 224 F.3d 797, 800–

01 (6th Cir. 2000) (internal quotation marks and citations omitted). The need for experts to rely on reasonable assumptions is particularly evident in class actions because a review of actual data for each member of the class is not practicable.

Defendants first argue that Edward Stockton’s assumption that a uniform defect existed in the fleet of diesel Cruzes is unreasonable because Plaintiffs’ individual vehicles were never tested.

But Plaintiffs have alleged that the defect is not only built into the design of the emissions-control system but also coded into the software. *See* ECF No. 393-3 at PageID.33985–87 (filed under seal). Defendants do not dispute that each vehicle had the same software and ECM installed at the time of purchase. Moreover, Plaintiffs allege that a defect exists in the class vehicles’ emissions controls, and that vehicles sold under one Certificate of Conformity must have the same operating software in the engine control module (“ECM”) that controlled their emissions functions. ECF No. 393 at PageID.33857 (filed under seal). Further, Stockton calculated damages at the point of purchase, so any actions or alterations by Plaintiffs or other class members after they purchased their vehicles are irrelevant. *See* ECF No. 393-2 at PageID.33953–54 (filed under seal).

Stockton’s assumption that the alleged defect was material to consumers is substantiated by the record—including Defendants’ own market research and advertising campaigns—as well as by Plaintiffs’ expert Venkatesh Shankar. *See, e.g.*, ECF No. 393-15 at PageID.34765 (filed under seal) (“The key insights from a study of US diesel perceptions showed that mileage was the dominant factor for diesel consideration/purchase and that the barriers to consideration of Chevrolet Cruze diesel vehicle were negative perceptions about diesel’s fuel costs, repair costs, noise, smell and being bad for the environment.” (footnote omitted)).

And Stockton’s two overpayment models calculate the overpayment for class vehicles by determining the differences in prices charged between diesel Cruzes and either Cruze Eco (DPP model) or other vehicles within the diesel Cruze’s competitive market segment (RP model), then it “adjust[s] for differences between vehicles that are unrelated to the allegations of the case and for differences between list prices and transaction prices.” ECF No. 393-17 at PageID.34857, 34863–77 (filed under seal).

Defendants also argue that the average transaction price and the MSRP–average transaction price ratio used for Edward Stockton’s calculation are contradicted by the prices that Plaintiffs paid and the actual transactional data that Defendants’ expert, Dr. Hitt, analyzed. ECF No. 344 at PageID.20775–77.

But Stockton’s models measure how the market price would have changed if the defect was disclosed at purchase, not the overall price paid. *See* ECF No. 393-18 at PageID.34984–86, 34989–90 (filed under seal). Thus, the diversity in prices paid for the diesel Cruzes seems irrelevant. Moreover, to the extent that Defendants argue that consumers purchased other options that increased the price over MSRP, it is entirely irrelevant to the calculation of overpayment. On the other hand, if Defendants are arguing that consumers paid a lower percentage of MSRP for their diesel Cruzes given the cars’ characteristics, then Stockton’s models already account for that and would merely substitute the lower percentage into the existing model. *Id.* at PageID.34991.

Even so, the use of averages in this case is an issue of weight, not admissibility. *See Teenier v. Charter Commc’ns, LLC*, No. 16-CV-13226, 2017 WL 3141051, at *4 (E.D. Mich. July 25, 2017) (“Had there been some sort of explanation, the issue becomes one of weight, which should be left to the trier of fact.”); *see also Tyson Foods, Inc. v. Bouaphakeo*, 577 U.S. 442, 455 (2016) (“[T]he Court would reach too far were it to establish general rules governing the use of statistical

evidence, or so-called representative evidence, in all class-action cases. Evidence of this type is used in various substantive realms of the law.”). Use of average, instead of actual, transaction data is reasonable when calculating damages for a class. *In re RFC and RESCAP Liquidating Tr. Action*, 332 F. Supp. 3d 1101, 1146 (D. Minn. 2018) (“As a general matter, statistical sampling is a commonly used and accepted means of assembling and analyzing data, *particularly in complex litigation*.” (emphasis added)). It would be impracticable to require experts to use only data of actual transactions in the class context. *See id.* at 1150 (“Establishing liability and damages in this case without the use of sampling would be unmanageable.”); *Tyson*, 577 U.S. at 455 (“In many cases, a representative sample is ‘the only practicable means to collect and present relevant data’ establishing a defendant’s liability.” (citation omitted)). Thus, Defendants’ arguments fail with respect to the variation in prices paid for the diesel Cruzes.

Similarly, Defendants’ challenge to the Retail Replacement Costs model is unavailing. The RRC model measures the “additional money that would be necessary for consumers to replace their current defective vehicles with comparable non-defective vehicles, as measured by the published Retail price of the Class Vehicles as of June 2016.” ECF No. 393-17 at PageID.34857–58 (filed under seal). For this calculation, Edward Stockton used:

- (i) The Clean Trade-in price for class vehicles in July 2016, which was the price at the time of the filing of the Complaint in this matter,
- (ii) the retail price that corresponds to the Clean Trade-in price for that month,
- (iii) the average tax rate that applied to U.S. vehicle purchases at dealerships in 2016,
- (iv) the tax amount that would apply to the purchase price, net of the credit for the vehicle traded in,
- (v) the average transactional expenses (license and documentary fees) that apply to U.S. vehicle purchases at dealerships, and
- (vi) the “shoe leather” expense associated with vehicle acquisition.

Id. at PageID.34878–79.

Defendants assert that Plaintiff-specific analysis using those six factors results in a calculation of damages using real-world numbers with varying results, meaning that the model is unreliable. But Defendants do not argue that the model's input information is wrong. Instead, they conclude that Plaintiffs did not incur the expenses that would require reimbursement.

But the RRC model calculates the value of a remedy that would have been available had the defect been disclosed. ECF No. 393-2 at PageID.33974–75 (filed under seal) (“[I]f there was a remedy available, [the RRC model] quantifying . . . a benefit of the bargain remedy that would have been available to the plaintiffs.”). In this way, Defendants’ challenge to the RRC models’ inputs is without merit.

4.

Edward Stockton’s models applied sound economic methods to reliable data to assist the trier of fact in determining the premium that Plaintiffs paid for their diesel Cruzes.

By applying his expertise and sound economic principles to reliable data, he used the Cruze Eco as a comparator in the DPP model. ECF No. 393-17 at PageID.34857, 34863–64 (filed under seal). The Eco was within the Cruze model line, had shared features (like a turbocharged engine and equivalent cabin space and trunk space), and had the highest fuel-economy ratings among Cruzes with the same transmission. *Id.* at PageID.34863–64. When Stockton researched and chose the Eco, he researched websites and market data regularly used by economists to segregate and consider vehicles. ECF No. 393-2 at PageID.33959–60 (filed under seal) (discussing invoice prices, MSRPs, options, features, names, and engines). Conventional economic analysis considers the market in which the vehicles compete rather than individual consumer preferences. *Id.* at PageID.33961–62. Because there is no “analytical gap between the data and the opinion

proffered,” Edward Stockton’s opinion should not be excluded. *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997).

At best, Defendants’ arguments about Stockton’s methodology go to weight, not admissibility. For that reason alone, they fail. *See Comwood Co. v. U.S. Tobacco Co.*, 290 F.3d. 768, 794 (6th Cir. 2002) (holding that an argument about the weaknesses in the factual basis of an expert’s opinions went to weight not credibility, as the opinions were “subject to vigorous cross examination and an opportunity for Defendant to introduce countervailing evidence of its own”).

Stockton estimated his transaction prices by applying economic principles to reliable data. To estimate the prices that Plaintiffs paid for the diesel Cruze, Stockton used a “Price Build-up Method” that builds to the average transaction price. ECF No. 393-17 at PageID.34868–69 (filed under seal). In order to build to the transaction price, he obtained data from reliable sources, like data from NADA, J.D. Power, and IHS Automotive. *Id.* at PageID.34877–80. The Price Build-up Method estimates the net dealer cost of the cars and adds a normal rate of dealership gross profit,⁴ which is the price above the cost of the goods sold, to determine the estimated net of the transaction prices that the consumers paid. *Id.* at PageID.34869–70. The Price Build-Up Method is a straightforward application of financial and economic data that economists, like Stockton, and dealership accountants regularly use. ECF No. 393-2 at PageID.33964 (filed under seal).

Defendants argue that Stockton’s transaction prices are unreliable because the uniform incentive amount is based on allegedly incomplete data. ECF No. 344 at PageID.20783–85.⁵

⁴ To estimate gross profit, Stockton used the average gross-profit percentage on new-vehicle sales achieved by franchised dealerships with domestic nameplates during 2014 and 2015. ECF No. 393-17 at PageID.34869–70 (filed under seal). Stockton estimated the discounts that the dealerships offered by using published, reliable sales data. *Id.* at PageID.3489–71.

⁵ This is not a “litigation created method,” which Defendants assert. ECF No. 344 at PageID.20782. Like other “economists and dealership accountants,” Stockton consistently uses this “straightforward application of financial and economic data.” ECF No. 393-2 at PageID.33964

But the relevant dynamic in the DPP model is the amount by which the market price for the diesel Cruzes would have changed at the point of purchase in a full-disclosure environment, or the variation in market price. ECF No. 393-18 at PageID.34986, 34988, 34989–90 (filed under seal). The DPP model does not attempt or need to determine the overall price paid for the class vehicles. Rather, it calculates the amount of overpayment for the engine bundle that was not delivered: the “clean” diesel with power, torque, and fuel economy. The DPP model thus excludes the portion of the price attributable to non-drive-train features. *Id.* To that end, the DPP model narrows the calculation to a difference in the diesel Cruzes’ and Eco’s base MSRPs, minus additional features that came standard on the diesel Cruze. *Id.* Even if consumers purchased other options that increased the price over that base MSRP, it would be irrelevant to calculating overpayment. *See* ECF No. 393-17 at PageID.34974–75 (filed under seal).⁶ If, however, consumers paid a lower percentage than what the DPP estimates to be the MSRP for the diesel Cruze, given its characteristics, then the DPP model will account for that. *Id.* at PageID.34866–67; ECF No. 393-18 at PageID.34991 (filed under seal). That is, the lower percentage would be substituted into the existing DPP model. *Id.* Thus, the DPP model would not need to change; only an input would. *Id.*

Stockton’s regression analysis accounts for significant variables and is admissible. In the RP model, he measured the premium that Plaintiffs paid for the diesel Cruze engine by using a

(filed under seal). The term “buildup method” is not novel nor created by Stockton. *Id.* at PageID.33964–65.

⁶ Defendants argue that Edward Stockton made a “critical error” when he calculated the transaction prices because he didn’t validate his method. ECF No. 344 at PageID.20784 (citing *Dow v. Rheem Mfg.*, 2011 WL 4484001, at *5 (E.D. Mich. Sept. 26, 2011)). But Stockton’s method is “testable,” and citing to the prices that Plaintiffs paid for their diesel Cruzes does not prove otherwise. Stockton provides a method to calculate damages. The amount of Plaintiff-specific damages will be adjusted based on inputs provided to the method. ECF No. 393 at PageID.33865 n.40 (filed under seal).

regression analysis. ECF No. 393-17 at PageID.34875–77 (filed under seal); *see Bazemore v. Friday*, 478 U.S. 385, 400 (1986) (per curiam) (“Normally, failure to include variables will affect the [regression] analysis’[s] probativeness, not its admissibility.”).

The cases that Defendants cite to the contrary are inapposite. *See* ECF No. 344 at PageID.20785–86. For example, in *Bickerstaff v. Vassar College*, in a regression analysis purporting to analyze differences in salaries based on sex and race, the expert failed to account for the only three factors that the college considers in salary increases—publications, teaching, and service. 196 F.3d 435, 450 (2d Cir. 1999), *as amended on denial of reh’g* (Dec. 22, 1999). And in *Reed Construction*, the court found that the regression analysis was inadmissible because it did not include a measurement of the overall amount of construction spending in the nationwide economy that explains the declining gap between national and local prices. *Reed Constr. Data Inc. v. McGraw-Hill Cos., Inc.*, 49 F. Supp. 3d 385, 403 (S.D.N.Y. 2014).

Defendants also argue that Stockton’s RP model fails to account for “major variables.” ECF No. 344 at PageID.20785.

But Stockton controlled for the following major variables: horsepower, brand, model year, fuel type, and an interaction variable for the Chevrolet brand and diesel-fuel variables. ECF No. 393-17 at PageID.34875 (filed under seal). For considering the major variables, the RP model is admissible. *Bazemore*, 478 U.S. at 400 (holding that regression analyses are admissible even if they omit important variables if they account for the “major variables” affecting a given analysis). In other words, Defendant’s argument with respect to Stockton’s regression analysis goes to its weight, not its admissibility. *Conwood Co. v. U.S. Tobacco Co.*, 290 F.3d. 768, 794 (6th Cir. 2002) (holding that expert opinions are “subject to vigorous cross examination and an opportunity for Defendant to introduce countervailing evidence of its own”). Defendants may challenge any

deficiencies in the variables used in the RP model during cross-examination. *Id.*; *see also Schechner v. Whirlpool Corp.*, No. 2:16-CV-12409, 2018 WL 6843305, at *7 (“[C]onsumer purchasing decisions are the results of immensely complex and subtle psychological exercises that marketing professionals and professors spend their lifetimes studying. But it’s not this Court’s role to jump into that morass and determine that [the expert’s] analysis is incorrect—that is the province of the jury.”).

For those reasons, Defendants’ arguments fail with respect to the variables in the RP model. The same is true of Stockton’s overpayment models calculating out-of-pocket damages. ECF No. 393-17 at PageID.34863–77 (filed under seal). Contrary to Defendants’ assertion, Stockton incorporated supply-side considerations and a consumers’ willingness to pay as an input into the analyses. ECF No. 393-2 at PageID.33937–38 (filed under seal). Specifically, Stockton used market price levels that are price and supply constrained. *Id.* at PageID.33939. He stated that the diesel Cruzes “are already produced, so the price paid does not have to justify the production of a subsequent hypothetical vehicle. It is the price paid given that the costs have already been incurred of production and given that the estimates I used are appropriate for that purpose.” *Id.* at PageID.33939–40. The methodology is reliable.

Stockton’s RRC model is also reliable and admissible. The RRC model calculates the value of a remedy that would have been available had the defect been disclosed. ECF No. 393-2 at PageID.33971 (filed under seal). If Defendants sold the diesel Cruzes in a non-repairable defective state, then Plaintiffs only had two prospects to be made whole: to possess a comparable nondefective vehicle, or to receive enough money to purchase one. That is what the RRC model calculates.

Defendants argue that the difference between the diesel Cruze's retail price and trade-in value is not an appropriate measure of damages for a defeat device. ECF No. 344 at PageID.20795. But the trade-in price when the Complaint was filed, in July 2016, reflected the moment when the defect was disclosed, and the market price reflected the new vehicle price. ECF No. 393-2 at PageID.33972 (filed under seal). The RRC model is based on applying economic principles to reliable data by using simple mathematics. *Id.* at PageID.33973. Indeed, that model is widely used in the insurance industry and in other clean-diesel settlements. *Id.* at PageID.33973–74.

Defendants add that the RRC model calculates damages based on a hypothetical transaction belied by the record evidence. ECF No. 344 at PageID.20795–96. But Defendants do not argue that the inputs in the RRC model are wrong. Rather, Defendants argue that Plaintiffs did not actually incur the experiences that would necessitate reimbursement. Like Defendants other arguments, these quibbles with the intricate details of Stockton's economic analyses are matters for their cross-examination and, ultimately, for the jury.

For those reasons, Defendants' *Daubert* Motion, ECF No. 344, will be denied as to Edward Stockton. Because none of Defendants' arguments in its *Daubert* Motion prevail, the Motion, ECF No. 344, will be denied.

IV.

Plaintiffs filed a motion to exclude the expert testimony of Ryan Harrington, Nick Molden, and Drs. Kimberly A. Neuendorf, Eric T. Bradlow, and Lorin Hitt. ECF No. 337 (filed under seal). Defendants responded, ECF No. 391 (filed under seal), and Plaintiffs replied, ECF No. 402 (filed under seal).

A

Federal Rule of Evidence 702 governs the admissibility of opinion testimony, as explained earlier. *See* discussion *supra* Section I.A. The crux of the opinion-witness analysis is “whether a putative expert’s testimony would be inadmissible junk science or instead would be testimony falling within the ‘range where experts might reasonably differ.’” *See Thomas v. Novartis Pharms.*, 443 F. App’x 58, 60 (6th Cir. 2011) (unpublished) (quoting *Kumho Tire*, 526 U.S. at 153 (1999)).

The testimony of Ryan Harrington will be discussed first, *infra* Section IV.B, then the testimony of Nick Molden, *infra* Section IV.C, followed by Dr. Kimberly Neuendorf’s testimony, *infra* Section IV.D, then the testimony of Dr. Eric Bradlow, *infra* Section IV.E, ending with the testimony of Dr. Lorin Hitt, *infra* Section IV.F.

B.

Plaintiffs seek to preclude the testimony of Ryan Harrington. ECF No. 337 at PageID.17915–52 (filed under seal). According to Harrington, Defendants “retained” him to:

1. Provide a description of the emissions control systems in the model year 2014 and 2015 Chevrolet Cruze Diesel, and GM’s disclosures to the EPA regarding these systems;
2. Evaluate Mr. Smithers’ portable emission measurement system (PEMS) and dynamometer testing and corresponding analyses of emissions results of the diesel and gasoline Cruze vehicles he tested, as well as the conclusions Mr. Smithers draws from those data and analyses;
3. Assess Dr. Levchenko’s analysis of the EDC software code as programmed in the 2014 Chevrolet Cruze Diesel vehicle and evaluate the opinions he draws from such analysis;
4. Describe the relevant vehicle emissions standards, including standards for light-duty vehicles and certification testing protocols; and
5. Describe the context of these emissions standards and control systems, including recent developments in “clean diesel” technology and investigations into “defeat devices.”

ECF No. 337-6 at PageID.18118 (filed under seal). Harrington analyzed the reports of Juston Smithers and Dr. Levchenko. According to Harrington, Smithers’s PEMS testing and analysis were inherently flawed, in part because “[e]xtrapolating the results from PEMS testing conducted

on a single vehicle to an entire population of vehicles is invalid and inconsistent with sound engineering judgment and practice.” ECF No. 339-7 at PageID.19879 (filed under seal) (emphasis omitted). Harrington also claims that “‘fixing’ the three ‘problems’ that Dr. Levchenko identified regarding the Subject Vehicles’ OAT [outside air temperature] Model would actually make the model *less* representative of the true outside air temperature and, under certain conditions, may result in *increased* NO_x emissions.” *Id.* Therefore, according to Harrington, the mechanisms that Dr. Levchenko identified were not a clever means of cheating emissions testing but legitimate features of the Cruze’s temperature-modeling system.

As Defendants note, Plaintiffs contend that “Mr. Harrington’s general training in automotive engineering does not qualify him to offer opinions on PEMS testing or data analysis.” ECF No. 391 at PageID.33266 (filed under seal). Plaintiffs, then, only seek to prevent Harrington from testifying about PEMS testing and the related analyses. Plaintiffs’ request will be granted.

As Plaintiffs point out, Harrington’s expert report “opines that: 1) PEMS equipment introduces unacceptable measurement uncertainties; 2) Mr. Smithers should have calibrated his PEMS equipment against a dynamometer; 3) Mr. Smithers should have designed his testing program differently, including duplicate runs of the same test routes, and testing multiple vehicles with multiple drivers.” ECF No. 337 at PageID.17917 (filed under seal) (internal footnotes omitted).

Harrington is a qualified automotive and mechanical engineer. He has a Bachelor of Science in mechanical engineering from the University of Nebraska and a Master of Engineering in automotive engineering from the University of Michigan. ECF No. 337-6 at PageID.18268 (filed under seal). Over the course of approximately 20 years, his career has progressed from an intern at Goodyear to the Division Chief of the United States Department of Transportation’s

Volpe National Transportation Systems Center. *Id.* And he has at least eight publications ranging from on-road testing of vehicle safety systems to fuel-economy modeling systems. *See id.* at PageID.18268–69. He has had a stellar career.

But Ryan Harrington has no education, training, or experience specific to PEMS emissions testing or data analysis. He admitted in his deposition that he has never conducted a PEMS test. ECF No. 337-7 at PageID.18398 (filed under seal) (“I have not conducted PEMS testing.”). He also lacks experience with respect to implementing a PEMS testing program. *Id.* (“I have not designed a route for PEMS testing.”). He has never even been asked to conduct a PEMS test or to interpret or to analyze the validity of PEMS testing results for non-litigation purposes. *Id.* at PageID.18400. Further, he has never been trained to use a PEMS unit. *Id.* at PageID.18399 (“I’ve done other emissions analytics, but not a specific PEMS unit.”). He has also never “spoken with any PEMS unit manufacturers regarding the proper use of PEMS equipment.” *Id.* He also did not read the entire user manual for the Semtech PEMS unit that Plaintiffs’ expert used. *Id.* And his deposition testimony demonstrated his lack of knowledge regarding PEMS testing and PEMS analysis. *Id.* at PageID.18414 (acknowledging that he was not familiar with a standard calculation contained in the EU Real Driving Emissions (RDE) regulations cited in his report). Harrington’s testimony also revealed that—despite his use of the RDE to criticize Mr. Smithers’s methodology—he was unfamiliar with the RDE’s provisions regarding test-route segments, an important component of emissions analysis under the RDE. *Id.* at PageID.18432.

Defendants argue that Harrington should be able to testify about PEMS testing because of his “background in automotive engineering, emissions testing, fuel economy and emissions standards, and on-road testing.” ECF No. 391 at PageID.33270 (filed under seal). To that end, Defendants liken Harrington to “an aeronautical engineer who opines on the flight of an insect

[i.e., a bumblebee] he has never seen.” See ECF No. 391 at PageID.33270 (filed under seal). No doubt, an expert on flying can testify to how bugs fly. Indeed, the dragonfly inspired the helicopter. Adnan Oktar, *Exploring the Evolution of Vertical Flight at The Speed of Light*, DISCOVER, Oct. 1984, at 44, 44–45 (discussing Sikorsky’s dragonfly-inspired helicopter). Yet an Apache helicopter crew chief likely could not testify to the mechanical intricacies of the Blackhawk helicopter; though similar, they are different systems.

This case concerns the reliability of Plaintiffs’ expert’s use of PEMS testing to gauge the emissions output of the diesel Cruze. At issue here are tests, not bumblebees. A more apt analogy compares the ACT to the SAT, both of which aim to measure candidates’ aptitude for post-secondary education. Could an expert on the ACT testify to the SAT’s ability to measure aptitude without taking it, reading it, interpreting it, analyzing it, supervising the administration of it, training on how it operates, writing a report on it, or knowing how to score it? Surely not. Harrington has general knowledge of engineering and testing emissions in labs, but his reach does not extend to PEMS testing.

In short, Ryan Harrington has no qualification, education, or experience that renders him qualified to assess the validity of PEMS testing, the data that results from a PEMS-testing program, or whether a PEMS-testing program was properly designed or implemented. He has not conducted a single PEMS test, has never received training in PEMS testing, and did not read the entire user manual for the equipment used in Plaintiffs’ PEMS-test program. Further, Harrington appears unfamiliar with standard PEMS-test calculations, even those based on regulations that he cited in his report. With respect to PEMS testing, his expert report merely opines on matters beyond his qualified expertise. Indeed, the record demonstrates that, to the extent that he appears to accurately opine on PEMS-related matters, his expert report was drafted by his colleagues—not by Ryan

Harrington. *See, e.g.*, ECF No. 337-7 at PageID.18391 (filed under seal) (“I had set forth the outline of the report and kind of the structure of it and then at my direction, my staff helped me draft some of it.”).

Harrington’s opinions on PEMS testing and PEMS analysis would confuse, not assist, the trier of fact. As indicated, his testimony with respect to PEMS testing could not be based on sufficient facts or data, could not be the product of reliable principles or methods, and could not reliably apply any PEMS-testing principles or methods to the facts of this case. FED. R. EVID. 702.

For those reasons, Plaintiffs’ *Daubert* Motion, ECF No. 337 (filed under seal), will be granted as to Ryan Harrington. Yet this finding does not restrict the other four topics that Defendants hired Ryan Harrington to address (i.e., reasons 1, 3, 4, and 5 mentioned above), which Plaintiffs do not oppose.

C.

Plaintiffs seek to preclude the testimony of Nick Molden. ECF No. 337 at PageID.17952–68 (filed under seal). Plaintiffs argue that Nick Molden does not have the knowledge, skill, experience, training, or education to testify about “protocols for using PEMS to investigate a possible defeat device in the U.S.” *Id.* at PageID.17954. Plaintiffs similarly challenge Nick Molden’s “verifiable training or experience with the U.S. emissions regulations governing” diesel Cruze. *Id.*

As Defendants note, they will call Nick Molden “to offer expert opinions on PEMS methodology and data presentation.” ECF No. 391 at PageID.33289 (filed under seal) (cleaned up).

Nick Molden has the experience to testify about the soundness of Mr. Smithers’s engineering judgment. Nick Molden is the leader of a world-class company involved in thousands

of vehicle evaluations from multiple markets for a wide range of emissions constituents. *See* ECF No. 337-9 at PageID.18481–82 (filed under seal). He has nearly ten years of real-world experience analyzing emissions testing data. *See id.* He has also published and publicly spoken about PEMS technology, its uses, and its limitations. *Id.* at PageID.18482–84. One of his publications analyzes PEMS data from 39 diesel passenger cars, emphasizing NO_x emissions. *See generally* Rosalind O’Driscoll, Helen M. ApSimon, Tim Oxley, Nick Molden, Marc E.J. Stettler & Avarinth Thiagarajah, *A Portable Emissions Measurement System (PEMS) Study of NO_x and Primary NO₂ Emissions from Euro 6 Diesel Passenger Cars and Comparison with COPERT Emission Factors*, 145 *ATMOSPHERIC ENV’T*, 89, 89–91 (2016). Although he is not formally educated in PEMS technologies or analyses, he has acquired extensive and specialized experience in emissions analytics, specifically related to PEMS and NO_x emissions.

With respect to Plaintiffs’ challenge to Nick Molden’s expertise on emissions regulations in the United States, Molden does not offer an opinion on the interpretation of U.S. emissions regulations; rather, his few references to the U.S.’s vehicle-certification process serve as only high-level background context. *See* ECF No. 337-9 at PageID.18497 (filed under seal) (“I summarize briefly for context the testing procedures used by the EPA, but the full detail and depth of those procedures is beyond the scope of this report.”). Such background information is admissible expert testimony. *See Smith v. Old Dominion Freight Line, Inc.*, 2016 WL 7422683, at *5 (W.D. Ky. Dec. 22, 2016) (“It should be obvious that if one of Defendants’ experts disagrees with the opinions set forth by one of Plaintiff’s experts, then he or she will preface the rebuttal report with background information[.]”).

Plaintiffs also challenge Nick Molden's testimony as "unsupported by any reasonable measure of technical data or foundation." *See* FED. R. EVID. 702(b); ECF No. 337 at PageID.17957 (filed under seal). Specifically, Plaintiffs claim that his opinions are *ipse dixit*. *Id.* at PageID.17958.

But all Nick Molden's opinions are based on Plaintiffs' expert's opinions. Indeed, Defendants only hired Nick Molden to rebut the expert testimony of Juston Smithers. *See* ECF No. 391 at PageID.33258 (filed under seal). Far from *ipse dixit*, basing an expert opinion on another expert's opinion reflects sound judgment. Indeed, a benchmark of any sound analysis is citing or critiquing the opinions of other expert opinions. *See In re Melton*, 597 A.2d 892, 901 (D.C. 1991) (en banc) ("If of a type *reasonably relied upon by experts in the particular field* in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence.").

In any event, to the extent that Nick Molden's alleged lack of familiarity with U.S. regulations had any bearing on his opinions, that lack of familiarity would go to the weight of his opinion, not its admissibility. *United States v. L.E. Cooke Co.*, 991 F.2d 336, 342 (6th Cir. 1993) ("[U]nfamiliarity with standards, bear on the weight of the evidence rather than on its admissibility.").

For those reasons, Plaintiffs' *Daubert* Motion, ECF No. 337 (filed under seal), will be denied as to Nick Molden.

D.

Plaintiffs also seek to preclude the testimony of Dr. Kimberly Neuendorf. *Id.* at PageID.17968–73 (filed under seal). As Defendants note, they will offer Dr. Neuendorf to rebut the content analysis of Plaintiffs' expert Dr. Shankar. ECF No. 391 at PageID.33305 (filed under seal).

Plaintiffs challenge Dr. Neuendorf’s expert report as unreliable for not “responding to the actual methods applied by the corresponding expert.” ECF No. 337 at PageID.17968 (filed under seal), Specifically, Plaintiffs criticize Dr. Neuendorf’s analysis of “Dr. Shankar’s *qualitative* content analysis through the lens of *quantitative* content analysis.” *Id.*

Plaintiffs’ argument about the substantive faults of Dr. Neuendorf’s expert opinion are challenges to the merits of her opinions and, therefore, go to weight rather than admissibility. Indeed, Dr. Shankar acknowledged that he consulted Dr. Neuendorf’s *Guidebook* “in developing the methodology for [his] content analysis in this case,” which he asserts is a qualitative analysis. ECF No. 344-40 at PageID.21776. And Dr. Shankar has relied on Dr. Neuendorf’s content-analysis methodology in other cases in federal court. *See In re Chrysler–Dodge–Jeep Ecodiesel Mktg., Sales Pracs., & Prods. Liab. Litig.*, Case No. 3:17-MD-02777 (N.D. Cal. Sept. 4, 2018), ECF No. 456-1 at 12 (citing Dr. Neuendorf’s *Guidebook* three times—including for the statement that the “best practice” of a content analysis is “being objective.”). As indicated, the expert opinions of Dr. Neuendorf—who literally wrote the book on content analysis upon which Dr. Shankar based his expert opinion—satisfy the requirements of Rule 702.

Doctor Neuendorf may offer her rebuttal opinions highlighting the flaws in and limitations of Dr. Shankar’s work, which are crucial to the jury’s ability to assess the weight of Dr. Shankar’s opinions. *See Aviva Sports, Inc. v. Fingerhut Direct Mktg., Inc.*, 829 F. Supp. 2d 802, 835 (D. Minn. 2011) (“It is the proper role of rebuttal experts to critique plaintiffs’ expert’s methodologies and point out potential flaws in the plaintiff’s experts’ reports.”). Similarly, she may testify to the soundness and validity of Dr. Shankar’s expert opinion.

For these reasons, Plaintiffs’ *Daubert* Motion, ECF No. 337 (filed under seal), will be denied as to Dr. Kimberly Neuendorf.

E.

Plaintiffs seek to preclude the testimony of Dr. Eric Bradlow. *Id.* at PageID.17973–83 (filed under seal). Specifically, Plaintiffs assert that Dr. Bradlow “is not qualified to opine on qualitative content analysis,” and that his opinions are “unreliable,” “contrary to law[,] and cannot help the jury.” *Id.* at PageID.17974, 17977, 17981 (cleaned up).

According to Dr. Bradlow, Defendants hired him (1) “to evaluate whether Dr. [Venkatesh] Shankar . . . conducted the appropriate analyses to determine if the alleged omissions related to the Subject Vehicles’ emissions systems impacted consumer purchase or lease decisions,” and (2) “to opine on the academic literature concerning the factors that may influence consumer purchase and lease decisions for automobiles.” ECF No. 345-9 at PageID.23258 (filed under seal).

Doctor Bradlow has the knowledge and education to testify about the effects of advertising and other factors on vehicle-consumers’ purchasing decisions. Doctor Bradlow’s opinions are based on his education and over 20 years of experience and expertise in the field of marketing. *See* ECF No. 345-9 at PageID.23267–88 (filed under seal). He has taught six different marketing courses over a decade at the Wharton School of the University of Pennsylvania. *Id.* at PageID.23283. He has served on 16 doctoral committees in marketing departments at five different universities. *See id.* at PageID.23281–82. He has at least 118 publications, many of which focus on marketing research, behavioral statistics, and behavioral modeling. *See id.* at PageID.23271–79. And his expert opinions are supported by peer-reviewed literature and industry research in the field of marketing.

Plaintiffs’ arguments that Dr. Bradlow’s opinions violate Rule 702 have no merit. Doctor Bradlow is a marketing expert—not a consumer-fraud expert as Plaintiffs assert. *See* ECF No. 337 at PageID.17974–76 (filed under seal). His opinions are directly relevant to key issues in this case,

including (a) the sufficiency of Dr. Shankar’s review of GM’s marketing and advertising regarding the materiality of the alleged marketing omissions to a reasonable consumer’s purchase decision; and (b) whether the heterogeneity in consumers’ vehicle-purchase decisions prevents class-wide proof of reliance, causation, and damages. And his expert report does nothing more than cite peer-reviewed literature, industry research, his education, and over 20 years of experience and expertise in the field of marketing—all of which other experts in marketing would rely on when rendering such opinions. In this way, Plaintiffs’ remaining arguments about the substantive faults of Dr. Bradlow’s expert opinion are challenges to the merits of his opinions and, thus, the weight of his analysis rather than its admissibility.

For those reasons, Plaintiffs’ *Daubert* Motion, ECF No. 337 (filed under seal), will be denied as to Dr. Bradlow.

F.

Plaintiffs seek to preclude the testimony of Dr. Lorin Hitt. *Id.* at PageID.17983–84 (filed under seal). Specifically, Plaintiffs assert that Dr. Hitt’s testimony is unreliable because it invokes a hypothetical “‘but-for’ world.” *Id.*

According to Dr. Hitt, Defendants hired him (1) to “assess whether Mr. Stockton established . . . that the Proposed Class members . . . suffered economic harm”; and (2) to “evaluate the validity and reliability of the damages methodologies created and proposed by Mr. Stockton for purportedly quantifying the alleged economic harm on an individual or class-wide basis.” ECF No. 345-10 at PageID.23301 (filed under seal).

Plaintiffs’ sole argument for excluding GM’s damages expert, Dr. Lorin Hitt, is that some of his deposition testimony (offered in response to questions by Plaintiffs’ counsel) is supposedly inconsistent with a few sentences from the Reference Manual on Scientific Evidence.

But Plaintiffs cite no case authority to exclude Dr. Hitt on this basis, and no legal authority supports the proposition that the Reference Manual on Scientific Evidence is a definitive text, much less *the* definitive text. Rather, the Reference Manual states that courts should not use it for evaluating the admissibility of expert testimony. Fed. Jud. Ctr., *Preface* to REFERENCE MANUAL ON SCIENTIFIC EVIDENCE, xv (3d ed. 2011) (“As in previous editions, we continue to caution judges regarding the proper use of the reference guides. They are not intended to instruct judges concerning what evidence should be admissible or to establish minimum standards for acceptable scientific testimony.”). Even so, Dr. Hitt’s testimony is entirely consistent with the Reference Manual, notwithstanding Plaintiffs’ selective quotation of that text. Doctor Hitt merely proposes an alternative damages scheme to contrast the scheme presented by Plaintiffs’ damages expert. Thus, Plaintiffs’ argument about the substantive faults of Dr. Hitt’s expert opinion only challenges the merits of his opinion and goes to the weight of his analysis rather than its admissibility. For those reasons, Plaintiffs’ *Daubert* Motion, ECF No. 337 (filed under seal), will be denied as to Dr. Hitt.

Because Plaintiffs’ arguments only succeed with respect to Ryan Harrington’s testimony about PEMS testing, Plaintiffs’ *Daubert* Motion, ECF No. 337 (filed under seal), will be granted in that respect and denied in all other regards.

V.

Defendants filed a motion to strike Plaintiffs’ rebuttal expert reports and Plaintiffs’ briefs opposing Defendants’ *Daubert* Motions and Motions for Summary Judgment. ECF No. 397. Defendants’ Motion to Strike requests three forms of relief. All three requests will be denied.

A.

First, Defendants request that this Court enter an order striking and excluding Plaintiffs' new expert reports, ECF Nos. 388-18 (filed under seal); 390-01 (filed under seal); 390-46 (filed under seal), 390-47 (filed under seal); 393-04 (filed under seal); 393-18 (filed under seal); 393-23 (filed under seal), including all information and data contained in them (i) pursuant to its authority to enforce its own Orders in this case, including ECF Nos. 309; 333; 384; and (ii) under Federal Rules of Civil Procedure 1, 16(f)(1)(c), 26(a)(2)(B), 26(a)(2)(D), and 37(c). ECF No. 397 at PageID.35893.

Second, Defendants request that this Court strike Plaintiffs' opposition briefs to Defendants' Motion for Summary Judgment, ECF Nos. 387; 388 (filed under seal); 389; 390 (filed under seal), and *Daubert* Motion, ECF Nos. 392; 393 (filed under seal). Defendants argue that this Court should (i) order Plaintiffs to revise and refile their briefs without relying upon, referencing, or citing any opinions, information, or data contained in Plaintiffs' new expert reports, and (ii) set a new deadline for Defendants' reply briefs. According to Defendants, Plaintiffs' opposition briefs heavily rely upon their new expert reports, making it difficult for Defendants to reply without addressing the improper, new expert materials.

Third, given that Defendants' reply briefs in support of their motions were due on January 14, 2021, *see* ECF No. 384, Defendants argue that this Court should (i) set an expedited briefing schedule on this Motion, with Plaintiffs' response due January 11, 2021, and Defendants' reply brief due by January 14, 2021; and (ii) suspend the current reply briefing deadlines until the Court has had an opportunity to consider and rule on this Motion. *See* ECF No. 397 at PageID.35894.

B.

A “district court always has jurisdiction to enforce its own orders” and “manage its proceedings.” *McAlpin v. Lexington 76 Auto Truck Stop, Inc.*, 229 F.3d 491, 504 (6th Cir. 2000) (quoting *Kokkonen v. Guardian Life Ins. Co. of Am.*, 511 U.S. 375, 379–80 (1994)). Additionally, “[i]t is the province of the Court to set deadlines in this case,” including for expert disclosures. *Tanner v. Grand River Navigation Co.*, 2015 WL 8310291, at *3 (E.D. Mich. Dec. 9, 2015).

Although Defendants assert that “Plaintiffs’ recent expert disclosures are new expert work,” ECF No. 397 at PageID.35914, those reports are declarations, and they neither exceed the scope of nor contradict the original disclosures. *See, e.g., In re Iron Workers Loc. 25 Pension Fund*, No. 04-CV-40243, 2011 WL 1256657, at *7 (E.D. Mich. Mar. 31, 2011) (finding that an affidavit was not a rebuttal expert report even though it clarified the expert’s deposition testimony).

Even so, the Sixth Circuit applies a five-factor test to determine whether a late disclosure was substantially justified or harmless:

- (1) the surprise to the party against whom the evidence would be offered;
- (2) the ability of that party to cure the surprise;
- (3) the extent to which allowing the evidence would disrupt the trial;
- (4) the importance of the evidence; and
- (5) the nondisclosing party’s explanation for its failure to disclose the evidence.

Howe v. City of Akron, 801 F.3d 718, 748 (6th Cir. 2015) (quoting *Russell v. Absolute Collection Servs., Inc.*, 763 F.3d 385, 396–97 (4th Cir. 2014)).

C.

Factor 1. There is no surprise to Defendants at this point. Plaintiffs made their disclosures in December 2020—nearly 18 months ago. *See* ECF No. 397 at PageID.35921. Any surprise has long since subsided. Defendants have had ample time to prepare for those purportedly new disclosures.

Factor 2. As Defendants argued, they would have needed “several months to analyze and respond” to Plaintiffs’ “new” disclosures. Defendants have had 15 months. This factor weighs against omission.

Factor 3. This Court has held that a “significant amount of time remaining until trial” gives adequate time to depose an expert and, thus, does not merit striking testimony. *Scott v. Valley Elec. Contractors, Inc.*, No. 15-CV-14281, 2016 WL 6070113, at *2 (E.D. Mich. Oct. 17, 2016). In *Scott*, the parties were less than four months from trial. *Id.* at *2. Here, there is no definite date for trial, and the requisite prioritization of the backlog of criminal trials due to the COVID-19 pandemic must be considered. Both favors permitting the evidence.

Factor 4. “[T]he alleged importance of the proposed expert testimony does not override the district court’s power to enforce its scheduling orders.” *Estes v. King’s Daughters Med. Ctr.*, 59 F. App’x 749, 753–55 (6th Cir. 2003) (unpublished). This factor weighs in Defendants’ favor.

Factor 5. Defendants argue that “Plaintiffs have no rationale for their delay in disclosing this massive, new expert work and reports.” ECF No. 397 at PageID.35924. But the size and complexity of this case say otherwise. Indeed, after five years of litigation, the docket now amounts to more than 39,000 pages. *See* ECF No. 435 at PageID.39274. And the nature of this case is far more difficult than the average, as it involves analyses that require intellectual rigor from experts in at least five different fields of study. As indicated from the nuances of the parties’ arguments for and against their *Daubert* Motions, the parties understandably felt inspired to address every factual nuance in this case, and they did. But the waters have calmed, so Plaintiffs’ overzealous briefing will be excused, this time.

D.

Defendants' other arguments either do not cite controlling authority or do not outweigh "Sixth Circuit policy 'valu[ing] the disposition of cases on their merits.'" *Miner v. Ogemaw Cnty. Rd. Comm'n*, No. 1:21-CV-11192, 2022 WL 957534, at *10 (E.D. Mich. Mar. 29, 2022) (quoting *Burrell v. Henderson*, 434 F.3d 826, 832 (6th Cir. 2006)). This Court will not rewind the clock or require more briefing at this stage unless necessary. The status quo will be maintained, nothing will be stricken, and this Court will decide Defendants' Motions for Summary Judgment in accordance with this Order.

For those reasons, Defendants' Motion to Strike, ECF No. 397, will be denied.

VI.

Accordingly, it is **ORDERED** that Defendants' *Daubert* Motions, ECF Nos. 339 (filed under seal); 344, are **DENIED**.

Further, it is **ORDERED** that Plaintiffs' *Daubert* Motion, ECF Nos. 337 (filed under seal), is **GRANTED IN PART** and **DENIED IN PART**. Plaintiffs' *Daubert* Motion is **GRANTED** with respect to Ryan Harrington's testimony about PEMS testing and **DENIED** in all other regards.

Further, it is **ORDERED** that Defendants' Motion to Strike, ECF No. 397, is **DENIED**.

Dated: June 9, 2022

s/Thomas L. Ludington
THOMAS L. LUDINGTON
United States District Judge